AMERICAN BE FJOURNAL



Volume 98 1958

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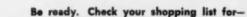




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Our Cover Picture

DR. EVA CRANE Director of the Boe Research Association and Editor of Bee World.

WHO IS IT? - A Contest, Editor Pat Diehnelt

March "Mystery Guest"

Dr. Crane has a Master of Science degree in Mathematics and a Doctor of Philosophy degree in Physics both from the University of London. After two University appointments and research in biological physics she became Director of the Bee Research Association in 1949. She began keeping bees in 1941 and quickly became interested in them experimentally. In 1950 she succeeded Miss Annie Betts as Editor of Bee World, international scientific periodical; she introduced and organized Apicultural Abstracts to summarize the world's beekeeping and research literature.

She has traveled widely. She paid two visits to the States in 1953 and 1957 and she probably knows more about American beekeeping and bee research than most Americans.

The Mystery Guest For April

Who is this pleasant gentleman? He has perfected one of the country's outstanding beekeeping schools. Send your answers to Cover Contest, American Bee Journal, Hamilton, Illinois, anytime during April. Confine your answer to not more than a double-spaced typewritten page (about three penwritten note pages). For the best story we will pay \$5.00 and give a three year extension in ABJ subscription; second, two years of ABJ; third, one year. To the next four, selected books. Answers will be published on this page in June as far as room allows. Play again or play new and happy landing.

WINNERS FOR THE FEBRUARY COVER CONTEST

No. I ... C. J. Beckley, Woodville, Ont. The February "Mystery Guest" is Cecil A. Jamieson, Apiculturist of the Canadian Department of Agriculture. Ottawa. He was born in a little place called Edgar that you will not find on any but a detailed map and on a farm not even deep, nostalgic memories would call good. Edgar is in hilly country between Lake Simcoe on the east and southern Georgian Bay on the west. The fact that Jamie lifted himself out of that environment and "went places" speaks eloquently

of the man. Graduating from Ontario Agricultural College as a specialist in apiculture, he went on to McGill University's Macdonald College with a scholarship to study insect physiology leading to an M.Sc. degree. Then on to Cornell as a Research Fellow, renewing a working partnership with Dr. E. J. Dyce, his teacher at O.A.C. He returned to Canada with his doctor's degree. Since then he has been content to serve his country and the industry in a relatively obscure way. He has many long years of service before him and the industry will rise to new heights under the leadership of this scholar and able man. Canada is proud of Cecil A. Jamieson and we feel that the American Bee Journal has honored itself, as well as Dr. Jamieson, by giving him a place on its cover.

No. 2-A. J. Jones, Malden, Mass.

Dr. Cecil A. Jamieson, Chief of the Apiculture Division, Central Experimental Farm, Dept. of Agriculture, Ottawa, Canada, is the name of the gentleman whose picture is on February's cover. Dr. Jamieson graduated from Ontario Agricultural College in 1937 as a major in apiculture. He studied advanced plant and insect physiology at McGill in 1941-42 and in 1947 went to Cornell. While there he was elected to Sigma Xi, honorary research fraternity, studied for his doctorate under Dr. E. J. Dyce who had been his professor at O.A.C. In December of 1949 he was appointed Dominion Apriculturist to succeed C. B. Gooderham. The good doctor is a member of various Agricultural and Scientific societies. He has written many articles on all phases of beekeeping, latterly with emphasis on Nosema and other diseases. In 1941 he announced discovery of a dipterous parasite of the honey bee, identified as Myopa species of the family Conopidae. In 1951 it was established in his laboratory that fumagillin inhibited Nosema. Judging from his ubiquitousness at bee meetings, he must be as pleasant as his smile.

No. 3-W. H. Turnbull, Vernon, British Columbia

I question if a better-known Canadian beekeeper could be found for your cover than Dr. Jamieson, Jamie to most of us, and one of the younger generation of whom we are justly proud. He is one of the foremost scientists in all matters relating to bee culture. He is "a beekeeper among beekeepers" at any meeting he attends

In his position of Dominion Apiarist he visits every Experimental Farm where bees are kept and keeps the operators up-to-date on all the latest things in beekeeping both practical and scientific. He is in great demand at meetings. I know that his opinion is sought and respected at all meetings of the Canadian Beekeepers' Council whose annual meeting he never fails to attend. His well-written scientific articles are in demand in both the United States and elsewhere. Our greatest pride is that where ever you go and his name is mentioned the comment is: "He knows his business."

No. 4-Milton J. Stricker, Stockton, N. J.

Did you ever feel you knew a gentleman whom you had never met? That is exactly the way I feel about Cecil A. Jamieson whose picture is on your February cover. As Dominion Apiarist, he succeeded C. B. Gooderham in 1950, a king-sized undertaking because Mr. Gooderham had spent a lifetime on the job and his record was enviable. Yet Jamieson more than lived up to expectations. His papers on bee diseases are sought by Canadians and Americans alike. His papers on European foulbrood are gospel here in New Jersey. He also has an American touch which probably results from his research under Dr. Dyce. As a member of the American Association for the Advancement of Science his interest in the latest developments in both countries is heightened.

Our congratulations also to E. R. Strong, Henderson, Texas, No. 5; Mrs. Robert Donovan, Drexel, Mo., No. 6; Alan T. Monroe, Mass., No. 7; and to C. F. Douart, Missouri and Francis Wickham, Pa.

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> AMERICAN BEE JOURNAL HAMILTON, ILLINOIS

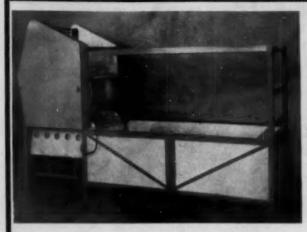
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The American Bee Journal

Hamilton, Illinois

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Associate Editors—M. G. Dadant, Roy A. Grout

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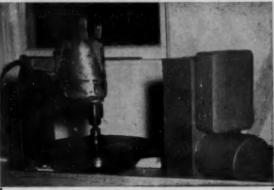
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With reg. queen	2 lb. pkg.	3 lb. pkg.
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26 - 99	4.50 each	5.50 each
100 - up	4.25	5.25 each

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Commercial Requeening

by M. H. Stricker

Here in the northern part of Jersey there seems to be only one way of producing enough surplus honey to make beekeeping profitable for the few beekeepers who indulge in honey production. This must be done with a minimum of labor so the beekeeper can operate as many colonies as possible, or perhaps handle another job or maybe another branch of beekeeping such as queen rearing or perhaps supplying bees for pollination.

To do this, the apiarist finds he must go into winter with strong colonies headed by young queens of a strain suited for his area. After his early spring inspection, he piles on his supers and allows the colony to build up in time for the tulip poplar flow in June. In most cases,

he allows these colonies to operate without excluders. Confining the queens to the two lower standard supers is done at the same time the honey is taken off and the winter stores are left, about September 1st.

All the producers using this system realize the importance of good queens—queens that will work efficiently with this system of management and queens that can build up populous colonies at the right time to harvest bumper crops.

In fact, in the past year the few "doubting Thomases" who still believe that the queen "may not be as important as thought" have begun to see the light. Several bought queens in April, requeened and found these colonies produced more surplus honey than those "star boarders" they had

been nursing along for so long as alleged colonies. In many cases it was easily proved that a dollar and some cents investment in a new queen gave an added profit of five dollars or more per colony, and all the more welcome because wholesale honey in Jersey was worth selling in 1957.

Of course, the big problem is obtaining choice stock for requeening in late March or early April. Many have tried requeening at this time of the year since it could be worked in easily with the early spring inspection, but most have met failure since the queens that could be obtained were not suitable for the area or this "let-alone" system of beakeping. Later on, when queens are more plentiful and local producers are able to produce stock, bred and



Summer inspection; broad can be lifted to the top story.



An entrance hole may be provided.



Queens or sealed cells may be added on second day.



The three colonies in back raw have had queens added to the top supers (supers pointed a contrasting color).



Haney removed and top colony united (honey in back waiting to be carried to the truck).



Colonies requeened and ready for winter.

tested for these areas, colonies are piled high with supers, making extra labor, plus the inconvenience of trying to find an unexcludered queen in these "barrels-full-of-bees." When the honey comes off in the fall, some requeening is done then, but mostly the honey producers are too busy getting the crop off to bother finding the queens.

What to do? And when and how to do it? More and more honey producers in this area are turning to something they call, "Letting the Bees Do It," and all are saying the results are worth repeating.

There are many variations, all springing from the original plan of raising a queen in the top story of the colony, and using this queen to replace the old one below. Each operator seems to have his own particular refinements, and each swears his system is best, and so it is for him.

Perhaps the most popular is to confine a frame of eggs, a frame or two of sealed brood, a frame of honey and pollen with the adhering bees to an upper story during the beginning of the summer honeyflow in June. After two days a caged queen or a queen cell can be added to this brood and an entrance provided, such as a hole drilled in the top super or in the edge of the escape board.

This upper story can be separated from the rest of the colony by double excluders or by an escape board with a piece of excluder zinc fastened over the escape hole. This allows the two queens to remain apart, yet the worker bees from both sections can mingle freely. It also allows the top colony, when it is small, to gather

food from the lower chambers and, of course, deposit nectar when it is larger and able to gather for itself.

Supering, by the way, should always be done under this top deck, allowing the queen and her brood to remain on the top of the pile.

At harvest time, usually around Labor Day, the honey is removed and this queen and her bees are placed as a third story over the original two bodies that have served as the brood nest of the parent colony all summer. No excluders or barriers are used at this time and the two families are allowed to unite. This, of course, entails no problem since the worker bees had been mingling through the supers during the summer months.

Toward the end of the month, most beekeepers will begin to ready their bees for winter (whether their extracting is complete or not). At this time they will find the unification complete and the colony headed by one queen. Stores are then "finagled around" so that the top story is as full as possible of sealed honey. Bees, pollen, brood and a smattering of honey are in the bottom one or two bodies depending upon the owner and his preference for either two- or three-story wintering.

In a warm autumn it is sometimes found that both queens are still alive and perhaps laying eggs in close proximity. They are ignored by the operator and nature takes care of the elimination of the older queen at a later date.

Some readers will protest that they have had instances where the old queen survived and the young

was killed. With this I will agree because it has happened to me. But it is all right with me, because more and more I have become convinced that the bees know far better than I which should be eliminated, but in most cases the younger and more vigorous will remain to head the colony through the coming winter.

The same system can be used with a queen or ripe cell placed in the top story in late August or early September if your season is long enough or if it better suits your schedule. This seems to be the easy method for these beekeepers who have lots of colonies and feel that they should requeen regularly.

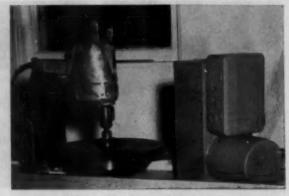
Most feel that when all the supers are piled on at the beginning of the flow when a brood inspection is in order, the queen can be evaluated, and if decided to requeen, some brood can be placed in the top story and cells or a caged queen can be introduced. Not only is this easier than going to the bother of finding the queen, it also adds extra bees and "morale" to a colony that you might want to requeen because it might be weaker than average.

Many variations have been tried, such as using four frames of brood upstairs and letting this "nue" raise its own queen, or placing the old queen upstairs and a new caged one downstairs. Other combinations may be used. In fact, from the ideas here you might be able to work out your own system for your own area which would be so much better than those used by many North Jersey beekeepers so successfully.

New Jersey

Automatic Controls for Radial Extractors

by R. H. Banker



Automatic control for radial extractor. Regulates time at four speeds.

An entirely automatic control. which regulates the length of time the extractor runs at each of four different speeds and which automatically increases speed without any attention during the preset time cycle, is now available. The clock, which acts as the time control and shifts the extractor into a higher speed at regular preset and adjustable intervals, returns automatically to starting position when the cycle is completed. To start again all that is necessary is to turn the speed-control switch back to starting position and flip on the main switch.

Many of the readers have undoubtedly seen the unit developed by C. D. Owens at the University of Wisconsin or seen the slides of it, which uses a drill motor for power. This control unit, while in many ways different from the one developed by Owens, operates on the same general principle.

It is a very neat and compact unit, very efficient, designed to give many trouble-free years of service and can be very easily adjusted to suit any type of extracting condition which the operator may encounter. It eliminates all clutch slipping difficulty, the danger of becoming entangled in shafts and pulleys; eliminates all the shafts, drive bearings, brackets and everything on the top of the conventional extractor except the brake. This makes a much neater appearing and easier to keep clean extractor and it frees the operator from the tedious and time-consuming chore of shifting into the three higher speed ranges, leaving the operator entirely free to do other things and it can very easily be adapted to any radial extractor. Adaptors from drive shaft to drill motor for either Woodman or Root machines are furnished with the

You can extract easier and faster when the control is used and do a better job with considerably less comb breakage.

The drill motor, which acts as the power unit, can be removed for other uses just as easily as changing drill bits.

We have been asked many times how the drill motor can possibly pull the load and stand up under that type of usage and why we don't use some other type motor. There are several reasons. Drill motors are readily available and reasonably priced. Any standard make 1/2" drill motor with a free load speed of 450 to 560 R.P.M. drawing 3.5 to 4.5 AMP, can be used and will give good service. Any other type motor that could be used would be a specially built motor or it would be necessary to use a gear-reduction unit thus increasing the cost tremendously. A drill motor is one of the most efficient motors manufactured from the standpoint of current consumption. They are made to run at various voltages and designed (the better ones) for many years of hard continuous service. Drill motors draw less amperage than most of the other types of motors made. This makes it possible to use parts that are amply rated for the job and hold their cost relatively low, making a much lower priced control unit than if other type motors were used.

The motor we used to extract our 70,000 pound crop this year is an old one we have had for at least six years and has been used extensively in that period. It gave us no trouble this year and on checking it at the

end of the season it is still in excellent condition and ready for another season. The drill motor used at the University of Wisconsin has been used on the extractor since 1958 with no trouble.

The standard model control can be used to run two extractors, providing one extractor is off while the other is running. A heavy duty model is also available, which will run two extractors, starting and stopping at the same time, at a slightly higher price.

After using this control for a season's operation we feel we wouldn't part with it at any price if another was not available.

Minnesota

Legume Seed Prices Down

The Agricultural Marketing Service reports that prices of all legume seed are down sharply from a year ago although still above the low point of 1937-39.

Comparison of 1957 and 1958 prices is as follows:

	1957	1958
Alfalfa	41	37
Alsike	48	35
White Clover	98	78
Sweet Clover	19.40	16.90
Ladino	80	60

We had assumed that the Soil Bank program would have meant a spurt in price or is the drop tied up with the probable plan to drop the Soil Bank plan?

Tenth Year Japanese Bee Journal

Editor K. Sekiguchi announces that the Japanese Bee Journal will celebrate its tenth anniversary with a commemorative meeting on April 6 at the National Scientific Museum in Tokyo. Our Congratulations.

What is the Role of Moisture in Nectar Secretion?

by M. G. Dadant

It is a trait of the average beekeeper to be always anticipating what the future will bring or is this a common trait with most humans in all lines of human endeavor?

In any case, we beekeepers do try to look ahead.

A case in point is a recent discussion right in our own office as to the possibilities for bees in our own locality for the 1958 season. Our senior, Mr. L. C. Dadant, was replying to the remarks of one of the staff that we had plenty of rain all fall, and everything was lush and green. L. C. responded it has been his observation that it is to the beekeeper's advantage to have plenty of rain, especially if it comes in the fall in time to invigorate vegetation. It always seems to presage a better season next year.

Looking deeper into the remarks, we are wondering if the mere sprouting of latent seed and growth of nectar-bearing plants in the fall are all of the situation. Naturally, we have prospects which are better if we have honey plants growing rather luxuriously in the fall, rather than a dry fall with no moisture and a complete absence either of sprouting seeds or hardy growing prospective nectar producers.

But a study should be made of this very subject. Is there some connection between moisture-fed plants in the fall and vigorous growers and nectar producers in the spring, aside from available hardy plants. Is there some possibility that these early nurtured plants with abundance of moisture do better because the moisture is available in ample time so that the sprouting and growing plants not only get the moisture, but that moisture has taken unto itself some of the mineral nutrients which make for better nectar production? In other words, if we have moisture in abundance it means that this moisture, particularly if deep penetrating, will be able to absorb some of the minerals in the soils and make them available to the growing plant.

A case comes to mind of reports not long ago of the better possibilities from trees and ahrubs of the East and southeast coast, if moisture is abundant in July and August of the year before. Is it because such moisture penetrates deeply into the subsoil and has a chance to absorb unto itself, nutrients in the soil itself, which might not be made available by a mere contact of moisture with the soil, followed by a quick absorption and use of such moisture?

If our suggestion has any merit, might it not be worth the effort of some of our scientists to investigate the matter? In fact give deep concern to the effect of mineral content of soils on nectar secretion.

The Europeans are ahead of us in this line of investigation, as is evident by the numerous references to this in their magazines and reports of various investigators, even though the availability of plenty of moisture, months ahead of the growth and blooming of the nectar producing plant does not seem to have had much attention.

Now that these suggestions have been made, will the elements conspire against the opportunity to observe in those sections which have had ample and continued fall moisture, whether such hints have a bearing on the outcome of the season? And herein lies the lack in personal observation; uncontrollable factors have a way of spoiling the best of well-made ideas and plans. And here is where the scientist has the advantage. He can, on a small scale at least, simulate natural conditions and at the same time control the outlying factors, such as sunshine, temperature and moisture, to suit his experiments.

Here is probably also the reason why, one season with another, the irrigated sections have the advantage. If water is available and not limited by runoff, the farmer is able to regulate time of water application and its amount. He may get the deep penetration of such moisture into the soil and thus get as near as is humanly possible ideal growing and blooming conditions.

It has many times been said that alfalfa yields most and richest nectar



with "wet feet and a dry head." We may get this occasionally in the unirrigated sections. We approach it more often when we can control one or more of the elements which make for such conditions.

And in a discussion of the influence of soil content on nectar richness and nectar secretion, we should not forget that there are minor elements in minute amounts which may act as catalysts in making available other minerals, or may in themselves be the elements which unlock the door to more bounteous nectar secretion.

Bear in mind that new fuel oils and concentrates, which ten years ago appeared to have no commercial value, are now being used for the firing of some of our high explosive engines.

Honey Price Support Operations

As of Feb. 15, 1958 the Commodity Stabilization Bureau of the U.S.D.A. reports 2,568,280 pounds of honey under loan, there having been some 350,000 pounds released or redeemed. In addition 1,212,118 pounds are under purchase agreement.

These amounts exceed the totals of the 1954, 1955 and 1956 programs by nearly 50% but are much less than the 1953 program when some four million pounds were either on loan or purchase agreement at the same date, and far less than the 1952 program when the total amount under loan or purchase agreement was in excess of 13 million pounds.



Left, Director of Agriculture, Mr. Stannard; Illinois Governor William G. Stratton in center; and Eugene Killion, handing one of National winning jurs of chunk honey to the Governor.

The Killions Win Again

Eugene Killion (Paris, Illinois) and his father, Carl, won the 1957 Federation Sweepstakes and first place for both chunk honey and for beeswax at the National Honey Show in Tampa, Florida. In the chunk honey display there were 6 21/2 lb. jars. After the Show, one of them, was presented to Governor William G. Stratton of Illinois (see picture above); one was bought for \$250 by Mike Rendaci, one of Indiana's leading Dodge and Chrysler dealers, Clinton, Indiana. Mike has been interested in agricultural displays for many years and he considers such recognition worth his support.

Another of the six prize jars was presented to Governor Collins of Florida; one was sent to the Diamond Match Company; one jar is being presented to President Dwight Eisenhower by Senator Everett Dirksen of Illinois; and one graced the table for the Golden Wedding Anniversary of Mr. and Mrs. Joseph H. Reising in Kolb's German Restaurant in New Orleans.

A letter from Carl Killion, Sr., says: "Gene does not intend to enter the show again. Three times a winner is enough for anyone." He captured the sweepstakes at the National at the Minnesota State Fair in 1953. He repeated his winnings in 1954 also in Minnesota. In 1955 and 1956 neither of them entered the show in Illinois as Carl was superintendent. The Killions have just moved into

a new honey plant, a building 34 x 45 feet. It has controlled humidity and temperature, conveyor belts and special work rooms. All stainless steel processing units are installed with honey to be piped through for processing. This year they will be running about 500 colonies.

Things I Wouldn't Know If I Did Not Open My Hives by Elva Kirlin

I have been keeping bees for fortyfive years, and 40 pounds of stores per colony will see most of my bees through the winter. But, there are always a few that will require more stores than that, and how disappointing it can be to go out in the spring and find some of my strongest colonies have died from starvation.

The past four years I have been checking my bees for stores about the middle of February. Those short on stores, I give a pail of sugar syrup 2 sugar to 1 water. I haven't lost a colony from starvation since I've begun this method of early examination.

This year I started out February 17th, ten degrees below zero, and was surprised at things I observed in a beehive at this low temperature.

My yards are all in naturally protected locations. I would rather have them protected this way than by any method of packing.

I use a waterproof cloth in place of a honey board, and at the location

of the cluster I cut a hole in the cloth, and place a 10 lb. pail of sugar syrup, with one small hole in the lid, over this hole in the cloth, directly above the cluster of bees. They were able to take the syrup at this 10° below zero temperature. Also with a top entrance the bees took short flights and returned to the hives.

I'm convinced now that if I lose any colonies from starvation, it's no one's fault but my own.

Illinois

California Notes

Available from the Department of Agriculture at Davis is mimeo A-19 covering bee diseases. Also A-30.

They cover diagnosis, and methods of control including medicinal agents. A-36 is a concise and very interesting report of the State Annual Convention for 1957 held at Stockton.

Editorial-

Help For Honey

HONEY will be included in the April listing of the Food Distribution Division of the United States Department of Agriculture. Forty-five thousand copies of this bulletin go to the Food Distribution and Grocery Trade to enlist that industry's aid in stimulating greater sales of the Plentiful Foods.

A similar number go to Food Service Establishments stressing ways for extension workers, institutions, schools etc., to utilize those products in Plentiful Supply.

In addition, information materials are made available and distributed to newspapers, magazines, radio and TV stations to reach both the food trade and consumers.

HONEY will also be included in "McCall's" Plentiful Food list for the months of April and May.

This is an excellent opportunity for our industry to cooperate with displays etc., particularly during "Honey For Breakfast Week."

It is also an excellent opportunity for our industry to help move that portion of the crop still unsold and thus create an active market for the new crop.

We urge you to do everything possible to help make the month of April the biggest honey sales month in our history.

Consumers will be alerted, looking for honey, and ready to buy it. Let's get on the band wagon and see the job done right.



BEES ALL OVER — Charles Ater, Arenzville, Illinols, brought in this picture several years ago (shame on us). Somehow he managed to get his loving pets in a swarm to decarate him. No shirt, no voll.



GREENHOUSE POLLINATION — Milton Stricker in New Jersey makes sure the bees can fly both in and out of the house. Colonies stay strong and contented that way.



TRIPLE NUCLEI — Alfred Bergstu, now at Jamestown, New York, secured this picture while employed by the government at Kelley's Island. Shows a triple nucleus arrangement for queen rearing or testing.



MANITOBA QUEEN — Miss Lydic Temsic, queen for the year, sister of Shirley Temsic, featured in March last year. Both from Winnipeg. Picture from D. R. Robertson, Secretary of Manitoba Association. Father, C. T. Tomsic, has been a beekseper for over 20 years with between 100 and 200 colonies. Congratulations Lydial



FIRST TASTE OF HONEY — From Gerald Wunsch, former Michigan beekeeper, now a missionary in New Guinen. Some of his friends enjoy their honey. Picture from Baxter Woodman, Grand Rapids, Michigan.



The Sideline Beekeeper

April finds bees skipping merrily from bloom to bloom on fruit of all kinds. This young fellow finds watching them quite a pastime. The picture is from J. C. Allen and Son, Rural Life Photo Service in West Lefayette, Indiana. The bay is James Russell Allen, son of Chester Allen and grandson of J. C. Allen. This boy, in 1957, was a young man of 22 and in the Armed Services. The apples are Starks Delicious in the orchard of Ransom Braman, Belding, Michigan.

REQUEENING without DEQUEENING

by PAUL D. McINTYRE

Here is a simple method of requeening colonies without dequeening. It also prevents swarming and increase and keeps all the bees in the one hive.

In the spring a queen excluder is placed on each colony and above this a full depth super of frames with foundation. Queens should be ordered to arrive just before swarming time. An extra inner cover should be prepared by making an entrance in the rim side of it about one-half inch wide and the center hole should be securely closed. A two-inch rim should be nailed to the flat side of this inner cover and a one-inch hole bored in the center of this rim directly over the entrance cut in the rim of the inner cover. Over this oneinch hole fasten with tacks one of the screen cones found in queen and drone traps. A shallow super can be used instead of the two-inch rim."

When the queens arrive merely pull, the parent colony backward, place an extra bottom board in front of it and place on this the top super of the old colony. It will be full of bees but no queen. Cover the old colony after removing the excluder. On the super of new drawn combs place the new caged queen close to the rear of the super, then the special inner cover. The rim with the screen cone will be on top and on this set the old colony. The bees in the old colony cannot get out except

through the screen cone and when they fly back they can't find the hole they came out of so will enter the colony below through the entrance in the rim of the inner cover. There must be no other opening into the top part or old colony. The bees below have no choice but to accept the queen given them. After five days gently pry the hive apart at the back and make sure the new



queen has been released but do not disturb the bees. After ten or fifteen days the old colony can be lifted off, supers given below and the special inner cover replaced and the old queen killed. This will be easy because the old colony will be almost empty. Twenty-one days later the old brood nests should be removed and fumigated.

This "contraption" can also be used in Demarcing colonies in the production of comb honey as it keeps all the bees in the one hive for maximum production and also prevents the worker bees depositing honey in the old brood combs.

This is especially useful in requeening cross colonies as no search need be made for the old queen.

If the weather is very warm ventilate the top part by placing nails between it and the rim on which it sets but be sure no bees can enter or get out.

This is just a new application of the old principle of removing bees from a tree or building. It worked very well for me.

Ohio.

Royal Jelly in France

"Bee Craft" (England) is authority for the statement that 12 beekeepers in France each produced over 33 lbs. of Royal Jelly in 1957 and that there is in the process of being formed, an association which has as its object the protection of these apiarists against exploitation by those agencies which are endeavoring to purchase the jelly at the lowest possible price.



BEEHIVES

and INGENUITY

by Donald R. Silvernail

Hives and equipment are fast becoming standardized, but here and there equipment turns up that is decidedly different. Some of it is different because it has been handed down from the past. Other items are different because beekeepers are ingenious and show surprising originality. There is no other area where more individuality is displayed than in the field of beekeeping.

The first year in beekeeping I purchased two shallow supers with frames that were very different from any I had seen. Both supers and frames were factory made, but some ingenious beekeeper had slotted the top bars. I soon discovered why these frames had never been used. The slots were too narrow to admit a sheet of foundation. On my bench saw I widened those slots to where the comb foundation slipped easily into place. The frames are very good ones, but it does seem odd to have the slot in the top bar, and the bottom bar solid.

Over in Minnesota, in a remote area, I found some interesting brood frames a few months back. The entire yard was run for comb honey, and the comb supers similiar to those in use everywhere. It was the top bars of the brood frames that intrigued me. Though many years

old, they must have been factory made, for they were uniformly and perfectly shaped. The underside of the top bar was shaped into a beautifully formed V. And each side of the V was concave. In cleaning these bars the side of a teaspoon fits perfectly into the concave sides of the V and makes an excellent instrument for removing the wax. They were evidently manufactured in an early day before comb foundation was in general use, for the whole idea of the V was to provide a ridge where the bees would start their combs. In most of the hives these ridges were used, but in other instances the bees ignored them entirely. The results were what you would expect. Left to themselves, and without the aid of foundation, the bees constructed large amounts of drone comb. Where the bees built straight comb within the frame, these could be removed for inspection. Where the V shaped starting point was disregarded, the result was a hodgepodge of comb that could be removed only by lifting out all frames at one time.

By persistent effort straight combs within the frames can be eventually achieved. One straight comb from one hive will at least help the bees get started in the right direction, and eliminate those diagonal formations. But the more I think about it, the more I am grateful for our comb foundation. Foundation represents a great forward stride in beekeeping.

Last week I discovered several hives of even more ancient origin. They were stored away in a loft and had been there for many years. The size is nearly that of our present Langstroth hive, but the brood frames run in the opposite direction. A number of the frames had been replaced with crude homemade ones. But many of the original frames remained just as they came from the manufacturer. This manufacturer (whoever he was) was very original in his design. The top bar was quarter round in shape. The bottom of this quarter round was meant to provide a starting place for the bees to construct their comb.

The end bars were of equal width from top to bottom, and of sufficient thickness to allow for an outside groove down the center. This groove was lined with a very thin metal. Vertical strips of wood to fit these grooves were tacked to the inside walls of the brood chamber. The frames are inserted by engaging the groove

at each end of the frame in a strip at each side of the hive. Then each frame is pushed down until the bottom bar rests on the hive bottom.

The whole purpose of the groove and strip idea was to give the frames uniform spacing, and to hold the frames upright. Here is an example of accurate frame spacing before the advent of the Stoller frame spacer.

Each of us can see the disadvantages of this hive. Propolis will make those frames difficult to remove, even though the metal-lined grooves were oiled or greased. No place is made for insertion of comb foundation—no planned bee space, etc. But in its day it represented decided advancement over bee gums and the old box hive.

(If any old timers among our beekeepers can identify either of these hives, I would enjoy hearing from them.)

Donald R. Silvernail, Rt. 2, Vicksburg, Mich.

Hungarian Book On Bees

From the publishers comes a 700 page cloth bound, well illustrated bee book by Orosi Pal Zoltan antitled "Mehek Kozott" (Among the Bees). The book seems quite complete in all phases of modern beekceping. While the price is not given we assume that a remittance of \$5.00 to the publishers, Allami Konyvterjeszto Vallalat in Budapest would receive their proper attention. The book was published in 1957.

Agricultural Bibliography

University of California Press at Berkeley has just issued a book of bibliography sources on agriculture titled "Literature of Agricultural Research" by Blanchard and Ostvold. Six pages of the book are devoted to apiculture and the sources of lists of books and magazines on bees as well as reference bibliographies. The book sells for \$5.00.

African Bee Journal

The South African Association of Beekeepers has made arrangements to take over the South African Bee Journal. In the future this magazine will appear monthly under the name of "AFRICAN BEEKEEPING."

A New Hive Scale For Use By One Man

by C. D. OWENS*

The hive scale described in this article is one solution to the problem of weighing hives that has troubled beekeepers and apiculturists. To date, two methods of weighing have been used: Placing of hives on the platform of a beam scale; and weighing with a spring balance supported by tripod. Both methods usually require two men and the handling of heavy equipment.

This scale is designed on the principle of a fork lift with a gross capacity of 300 pounds. It is constructed like a two-wheeled cart with the wheels in front and skids at the rear. Ball bearings are used to reduce the friction between the guides and the movable frame. The scale was made for the western-type bottom boards which have cleats under each end. Therefore, the hive-lifting mechanism has fingers on hinged arms that close in from the side to alide under the bottom board. The arms are held open by a spring and closed by brackets actuated by the back of the hive. To use this arrangement on a reversible bottom board, cleats should be added under the bottom board at each end. (A simpler method would be to place cleats under each side and have the lifting finger rigid, sliding under from the rear of the hive.) A foot pedal with a mechanical advantage of 4 to 1 is used as the lifting device. It is hinged so it can be folded up out of the way when not in use and catches under the movable frame to give more ground clearance. The weighing device is a commercial directreading hydraulic-compression unit placed between the lifting lever and the moving frame. The dial can be adjusted to read either the net weight of the hive, or the gross weight including tare of the lifting unit. The gauge has an easy-to-read 6-inch dial. Other types of sensing units could be used but they require more frequent calibration and are affected by temperature changes. This sensing unit stays in calibration over the normal range of temperatures and can be transported.

To weigh with this scale, you push

^aAgricultural Engineering Research Division, Agricultural Research Service, USDA



the frame against the hive and step down on the foot lever, and as the hive clears the ground the weight is indicated on the dial. The weighing unit is sensitive but when the lifting is stopped the needle comes to rest quickly for a reading of the hive weight. Easing up on the foot lever lowers the hive to the ground and as the unit is pulled back, the clamps open. This procedure makes it possible to weigh and record the weight of two hives a minute if they are closely spaced.

This scale was used in 1957 to obtain the weekly weights of 30 to 60 colonies under experimental shade tests. It was found to be satisfactory in sensitivity, accuracy, speed, and stability on rough terrain. One man can weigh and record weights of colonies rapidly without moving cumbersome equipment which will permit him to weigh large numbers of colonies frequently. The disturbance of the colony is slight and most weighing can be done without a veil or smoke.

Arizona

About Beekeeping In Northern Florida

by M. F. Robertson

Beekeeping in northern Florida (Duval County) is slightly different from keeping bees in other sections because of the long heavy flow in spring and a not too dependable flow in later summer and fall. Bees fly the year-round and we seldom have more than two or three days in the year

when they are unable to forage for nectar and pollen. They actually bring in pollen the full span of the year although there are several months in which little nectar is gathered.

Normally, maple and gum trees bud and bloom between the third and the fifteenth of January, followed by red bud, pears and other things. If you check your hives then you will find whitened cappings and small amounts of nectar near the tops of the combs in the brood chamber.

Then, it is time to move the bees to the orange groves. Orange and other citrus begin to bloom about the fifteenth of February. One super, in addition to the food chamber, is needed before March first. Then, if we have had normal rainfall, we will be able to put on about three more shallow extracting supers to allow plenty of room.

The bees will usually swarm between the first of March and the fifteenth without this room. The orange flow is a real fast one from about February twenty-first until about April tenth (in this county) and it is then that the bees like to build new combs. If you give them three supers of comb at first and then two of foundation (shallow) you will be able to remove the five supers about the fifteenth of April.

Then the colonies are moved to the gallberry swamp and the supers are extracted and returned to the hives. This gives the bees about ten days to clean out the combs and get organized for the gallberry flow. This is the finest honey produced in this state or any other state. Gallberry blooms from about the twenty-fifth of April until about the twenty-first of May. The honey is all very white resembling white paper. The good beekeeper will produce all of his cut or chunk comb honey from this as well as a good supply of extracted honey. The gallberry honey is usually fully capped and ready to remove by the first day of June.

However, the bees will not be moved again as almost all good gallberry locations also have a good supply of saw palmetto which starts to bloom at the end of the gallberry flow. You must remove the gallberry honey before palmetto and return all five supers to the hives as this is also a heavy flow of good quality but not equal to gallberry in flavor or color. This is the honey to leave for the bees unless you are fortunate enough to be able to move to a cabbage palm lo-

cation. Not too many of them available to a part time beekeeper in this county. Saw palmetto may furnish about four supers and we usually leave all of it as it has to last them from the first of August to early January.

From the thousands of blooms from August first to the middle of September there is seldom even a minor flow. From then to the last of October we have a mild flow of bright yellow honey from partridge pea and goldenrod, and from Spanish needle in a few spots. The fall flow may actually be a nuisance as it may cause a false build-up and generally the bees consume more honey building up their forces than the increase in workers can produce from their own efforts. So, the problem of leaving more honey at the end of the normal flow than otherwise would be necessary.

At the end of October colonies must be checked for stores and all of the

empty combs removed and stored. By placing all the combs full of honey in one super we can usually reduce the hives to the brood chamber and one or two supers for winter. Queens slow down in October and in November and December the colonies seldom have more than two full combs of brood. No winter preparation otherwise is needed except the use of entrance cleats to help the bees keep out wax moths in the rest periods of November and December.

In late summer an inspector will help check the brood and issue permits to move. I have found them to be very cooperative with the small beekeeper. I have had no problem selling all the honey my bees produce and I have had no trouble finding locations where gallberry and palmetto

Jacksonville Florida

to produce one surplus hive of honey and the weaker ones fizzled out.

This last spring late in March I got two more hybrid packages. On April 6th they had eggs and brood. Now I will requeen all my colonies with hybrids. If I get an extra super from each one it will more than pay me. I also find these bees stand drought conditions better and that they must have some resistance to disease. So this old hard headed beekeeper finds hybrids pay off.

Woodward, Oklahoma

The Florida Freeze

American Fruit Grower reports limb count on citrus trees in Florida following the cold weather shows serious damage to wood and foliage on 12% of the trees, serious foliage damage to 20% more, mild damage to 40% and no damage to 28% according to estimates of the authorities at Gainesville.

A Sideliner Tries Hybrids

by RAYMOND H. IRWIN

I have been using hybrids in northwestern Oklahoma since about 1932. I became enthused over bees and, being out of work, purchased a colony of Italians from a friend. From then to now I have been through the mill with my bees. From 1932 to 1949 (through the Woodward tornado year of 1947) I had increased to 21 colonies of 3-banded Italians. Then these started dwindling until in 1950 I was out of the bee business entirely, mostly because of the depredations of

However, this interval was short as a friend reported a swarm hanging on one of his peach trees. So I hived it and brought it home. Then, in 1954 I learned that hybrids were obtainable. I debated whether they could equal the ones I had increased to from the original "peach tree" swarm. I also figured that requeening was a money making scheme and not necessary.

Anyway I got a 2 pound hybrid package to see if they were all that is claimed for them. They were installed in the spring of 1954 but they did not build up well that year because of the severe drought. They seemed waspy and poor. They came through winter into 1955 and, in spite of a freeze that killed the fruit trees. wild plum and other spring flowers, the queen laid a solid pattern of



Raymond Irwin with colony of hybrids in-

brood. Then is when I began to note the difference. They made a rapid build-up, under continuing drought, but they made no surplus.

They came through the winter into 1956, with drought not so severe, and stored two eight-frame supers of honey and filled their own hive. The best that the regular stock did, was

More Marketing Action
A significant letter was received recently from one of our good subscribers to the effect that he did not feel that the effort had been made in marketing, the past two seasons, on honey that had been exercised in the years previous when there was the close hookup between the producers and marketers and the government officials whose function it was to aid in publicizing agricultural products. We are inclined to think there is a possibility as will always occur when a product is easily sold to "rest on our oars" without continuously driving for utmost featuring of the product in which we are interested.

All for It

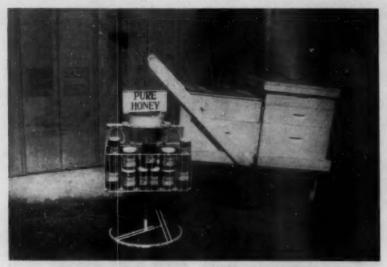
I have been reading about the Check-off Plan, deducting something from my check for honey and the buyer contributing an equal amount, for advertising honey. I'm all for it. Perhaps there are many others like

C. W. Fitzsimmons Mason City, Iowa

New Market

In the New York Times Magazine, W. E. Farbstein reports that the New York State Agricultural Experiment Station says a tablespoon of honey will sober a drunk.-Here is a new market opening.

J. P. Zollinger, Brooklyn, New York



An Educational Honey Display

by Adolphus Jones

The hobbyist beekeepers of the United States are the sources of good advertisement for the honey crop of the country. The picture above shows the display of honey produced, packed, and displayed by Adolphus Jones, a Diversified Occupational Coordinator, and a hobbyist beekeeper, of South Alabama, Bayminette, Alabama.

This wire stand was salvaged from discarded grocery display materials.

A fresh coat of paint and new cardboard bottoms put this stand in first class shape. The sign PURE HONEY was painted by the hobbyist beekeeper too. The display is neatly labeled by bright printed labels that were secured from one of the manufacturers of beekeeping supplies. This display, as can be seen, contains many sizes. The pound sections, 12 oz. jars, one pound jars, 1½ pound jars, and the 2 pound jars will give

the customers a choice of sizes. Honey is a fancy food. If all hobbyist beekeepers would display their product in neatly labeled packages and avoid putting honey on the market in bottles, fruit jars, and cans that are poorly labeled, the demand for honey would be greater and many more people would enjoy eating one of the really good natural sweets.

In the picture, is also shown a HANDY WAGON made by the sideline beekeeper. One to six supers of honey can be easily moved from the hives to the truck or to the extracting room. Do you have an idea that will help the small beekeepers? Write it up and send it in to one of the bee magazines!

Alabama

"Do You Eat Honey? Why, or Why Not?"

At the Dallas State Fair in October there was a guessing contest provided to answer this question. Erwin Glew, Paris, Texas, compiled a list of answers and we summarize them as follows:

I like it—Pure from Nature—Better for us and for our children—Best stuff for hot biscuits ever invented—Taste is wonderful—Nourishing and appetizing—Nature's best bread spread—Best for energy—It is easily digested—Source of vitamins—It's good for me. I'm 7.

EDITORIAL

A Thirtieth Anniversary

The American Honey Institute celebrated its thirtieth anniversary March 28, 1953. To assist in that celebration with Mrs. Harriett Grace, Director of the Institute during most of its years of existence, and her three charming helpers, were many dollars sent in by producers and other good friends of the Institute. These dollars came at the invitation of the Institute to join in a year-long celebration of its thirtieth birthday anniversary.

Partly because the Institute's invitation was lost in the back pages of the March issue of The American Bee Journal, but more because we wish to pay here a tribute to the Institute, we renew in this manner that invitation.

Send your birthday gift of one dollar (we hope that you can spare much more than one) to the American Honey Institute, 114 North Carroll Street, Madison 3, Wisconsin. In return you will receive a brand new Birthday Cake Recipe accompanied by an attractive picture of the cake, and have your name listed in the 30th Year Birthday Booklet.

The American Honey Institute has been our most effective organization during the past thirty years. Dollar for dollar it has accomplished more good for the honey industry than any other organization. It deserves and needs your continued support.

The American Honey Institute was the idea of the late Lewis Parks and one of its early standard bearers was Prof. H. F. Wilson, of the University of Wisconsin. Its first director was Malitta Fischer who was replaced by the present director, Mrs. Harriett M. Grace. The American Honey Institute was fostered in its early years primarily by manufacturers of bee supplies and honey packers. Since that time it has gained wide support from honey producers throughout the United States and Canada.

Yes, this is the thirtieth birthday anniversary of The American Honey Institute. We urge you to join others in sending your dollars in its support.

The Beginner and His Bees

by W. W. Clarke, Jr.

So, bees do make wax! Ever see them hanging in clusters and watch the new fingers of comb shape up under their combined dexterity? Young bees have very active wax glands under the abdomen and you often can see wax scales protruding beneath the segments. The scales are pulled out and manipulated while still soft and easily worked.

A BEGINNER'S STORY

by CLINT FRANKLIN

Bees interested me even as a small boy. My dad had one or two hives at different times but they would always die from some cause. As a teenager, I have tried several times to take bees out of hollow trees, but they would never seem to stay in the hive. Then the war came and I was out of circulation for four years.

I married during this time and have lived in Pennsylvania instead of North Carolina since being discharged from the Army. Then there were several years when we lived at places I could not have bees. Soon, after we were established in our own home, I became acquainted with a well-known part-time beekeeper here in York County by the name of John Flohr. He was a very helpful person to a beginner. He died this fall and I will miss his advice.

In June of 1956, he put a swarm of bees in a hive for me and got them off to a good start, I thought. But about a month and a half went by and my beehive became less and less active. I finally awoke to what had happened—I had lost the queen. I then subscribed to your magazine and ordered a queen from you. She arrived and was accepted by a very weak colony.

About the 15th of September, I saw the first new bees, as they were lighter in color than mine. In the first part of September, I had taken a cluster of bees with combs out of a tree and united it with my hive. Now all the old bees were dead before winter finally stopped much flight, and I had many misgivings that the other bees would pull through the winter.

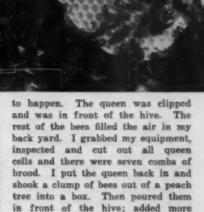
I fed sugar water through September and October and even then there were only five combs drawn out with honey in them and a rather small cluster of bees but all young. I put sugar on the inner cover for feed on warm days.

Then winter came and I was very busy as those months are my busy ones at my work. But at night, when my day's work was over and I could hear the cold wind blowing, I would wonder how the bright yellow queen and her handful of workers were doing.

I live on a ridge with no protection at all and I did not wrap the hive. I can say I learned one lesson from it. If you have a good queen with young bees and plenty of stores it doesn't have to be a big cluster to come through a winter; although we all like good strong colonies for the winter. A beginner with one hive sure hates to say his very first try is a failure.

On the 15th day of March I saw workers carrying in pollen from elm and maple. I kept close watch on the bees and every day when the temperature got over 50 degrees they were busy. I also noticed that on warm days there were more bees working and I felt very encouraged.

In the first part of April, I looked in and saw lots of brood. I also fed sugar water on cold rainy days. By the first of May I had a strong one-story hive. And here my inexperience shows up again. About 10 o'clock on a warm morning they tried to swarm and I did not want that



In May I hived a swarm of bees off a neighbor's multiflora rosebushes and had no trouble with them. These bees are darker than the ones in the first hive. This queen layed some brood that was beautiful to look at. The combs were full of brood on both sides and they built up real fast.

room and that was the last of the

Everything was doing well. The last of May, both hives were working well but it was getting rather dry. In June the clover started to bloom and I was worried that it was going to be too dry and I was right. When the bees should have been filling supers about all they were doing was keeping their stores in shape.

I did get about 12 pounds of good honey from the first hive which I believe will last us till the honey locust tree blooms in the spring. This spring I will be ready when they bloom as I have two very strong colonies.

The first colony has two hive bodies and one super of stores from the fall flowers as we had rain in time for them. The second has two hive bodies of stores. I could see the bottom of the clusters at the bottom entrance on both hives when I put the reducers in the entrance.

I am waiting with anticipation for spring and hoping for a good crop. Pennsylvania

Science and Industry



SCIENCE EDITOR

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Cannon Falls, Minnesota



THE CHECK-OFF SYSTEM-

A Complement to the Price Support Program

by A. A. Greenwood*

In 1955-56, the honey industry marketed its production with only minor help from the price support program and one has to go back to 1953 for a year when it was necessary for the Government to take over any honey, in great part because of honey sales promotion.

As we look ahead, however, there is an even bigger job to do. Much more promotion may be needed as the quantity of honey now under loan may be larger than for any crop since 1952. As you know the price support program is not a substitute for a marketing program. It is simply intended to provide interim financial help to aid beekeepers to market their honey in a more orderly manner.

With the start of the Check-off Plan two and a half years ago I was impressed by the implications of this self-help program. It seemed to complement the price support program in a most promising manner. In a competitive market you cannot long survive without modern merchandizing, promotion and advertising.

The sugar industry has the "Sugar Association" which allocates funds to the "Sugar Research Foundation" for research, educational work, promotion and advertising. The bee sugar industry has a similar organization. But according to the General Sales Manager of one of the major beet sugar companies such an organization "can contribute the background against which companies can conduct and improve their sales. But the real job of selling is a company job,"

As an example of farm people help-

*Sugar Division, CSS, U.S.D.A., at the Convention of the Federation at Columbus. A summary.



ing themselves, take the American Dairy Association which promotes milk products by a nationwide program of research, public relations, advertising and merchandising. It is financed by a two cent per hundred weight check-off from milk checks in 46 states. Its 1956 budget provided for a careful expenditure of \$5,500,-000. More than \$4,500,000 went into advertising through television, radio, magazines, newspapers, trade and farm publications, the Disneyland program, and merchandizing materials and contracts. More than half a million dollars went into research and professional education. Many million pounds of milk still remain to be brought under the program, yet their 1957 budget was a fourth larger than in 1956, or nearly \$7,000,000. They promote milk and milk products without regard to brand and leave the field of brand advertising to the milk processors and dealers.

Although the farm income from dairy products is about one hundred times the value of honey and beeswax at the beekeepers' level, is there any reason why beekeepers cannot similarly finance an annual promotion program of \$60,000 to \$70,000, about one hundreth the size of the Dairy Association program?

Your Check-off Plan, as developed in 1955, called for dealers and packers to forward two cents per sixty-pound can to the Honey Industry Council, one cent to be checked off from the dealer or packer payment to the beekeeper and the other cent to come from the dealer or packer himself.

This matching of funds seems to be an equitable sharing basis but the packer or dealer must market his brand of honey and this limits the amount of money he can afford to spend in promoting honey in general. So it might be well for the producers of honey to boost their share of the kitty a bit. Your Check-off Plan is based on a contribution of a little more than one-tenth of one per cent of the beekeeper's honey receipts, since a sixty-pound can tends to bring about \$8.00 on the average. contrast the dairy farmer's check-off is almost four times as high, or about four-tenths of one per cent of his milk receipts.

In California, beekeepers who market there have been making a seven-cents-a-can contribution to the

(Please turn to Page 148)

POLLEN - POLLEN SUBSTITUTES - BEEBREAD

Dr. Mykola H. Haydak

Department of Entomology and Economic Zoology Institute of Agriculture St. Paul 1, Minnesota

There is no question now in the minds of beekeepers that pollen is essential for the development of the colonies and, consequently, for successful beekeeping. Pollen supplies all food materials necessary for building up the bodies of bees and for maintaining their lives in a colony. Pollen is indispensable not only during the active season, but, as Farrar has proved, it is essential for successful wintering.

Not all pollens have the same food value. Investigations of Todd and Bretherick showed that the protein content of pollens varies from as low as 7%-11% in pine to as high as 35% in date palm pollen; the average content of fatty materials ranges from about 1% (birch) to 14.4% (dandelion) or even 17.5% (black walnut) and the ash content from about 1% (dandelion) to 5.5% (clover).

The bee-collected mixed pollens have a high nutritive value. According to Vivino and Palmer, the protein content of such pollens (dandelion, orchards, clovers, goldenrod) is between 18% and 22%. The protein, fat, phosphorus and iron content resembles most closely dried beans as well as dried peas and lentils, but the pollens analyzed were much richer in calcium and magnesium than any of these seeds. The copper content of pollens was exceptionally high. The bee-collected Paper No. 966 Misc. Jour. Ser.

Paper No. 966 Misc. Jour. Ser. Minn. Agri. Expt. Sta., St. Paul 1, Minn.



pollens proved to be a good source of the vitamins of the B group and of vitamin C. They also contained small amounts of vitamins D and E. But vitamins A and K were absent.

When, for some climatic reasons, there is a scarcity of pollen in nature, the development of colonies and, consequently, the possibility of a good honey crop is jeopardized. This fact was recognized a long time ago by the beekeepers. Trying to help their bees in distress, beekeepers have been offering a wide variety of foods to their bees. Later it was found that not all those materials offered had value for the growth and development of colonies. Recent investigations showed that a mixture, con-

sisting of soybean flour 3 parts, dried brewers' yeast 1 part, and dried skim milk 1 part, gives a fairly good substitute for pollen. An addition of 10% commercial casein to increase the protein content and 10% of dried egg yolk makes the mixture equal in food value to that of natural pollen collected by the bees in nature.

In his recent article in the December number of this Journal, H. L. Foote posed a question: "Is the fresh pollen or a good pollen substitute equal to beebread . . . a food product produced by the honey bees?" There is no doubt that beebread is the product of honey bees. How do the bees make this product?

After the pollen collector leaves her load of pollen in the cell, the house bee begins the work of packing. Using her mandibles and the adjoining part of the head she packs pollen tightly in the cell, at the same time adding some honey to the packed material. After several more loads are deposited, so the cell is well packed to a certain depth, the pollen is covered with a layer of honey to which, possibly, secretion from some glands is added. In such packed pollen cells bacteria of lactic acid fermentation start their work producing lactic acid which serves as a preservative of stored pollen-the same process which happens in packed corn or other green food materials in our

How does beebread, the product of the bees, differ from the fresh pollen (Just turn the page please)



Pollen supplement being fed to colony in spring (Photo from Henry Schaefer).



Broad from a supplement fed colony March 12th (Photo from Henry Rohmlow).

deposited in the cells? I do not know of any study which deals with this problem. Silage from our silos differs from the original material. According to Barnett, it contains 1-1.5% of lactic acid. There are some losses in proteins and considerable losses in carbohydrates. The digestibility of silage is by 6-8% lower. The content of niacin and riboflavin in the silage made with molasses is higher than that in the original material. The biological value of proteins remains the same. Amino acids are formed, probably by the action of bacterial enzymes. During the process of fermentation mainly lactic acid is produced, but other acids-acetic, propionic, butyric, are also formed. About the same changes occur, probably, in the bee stored pollen.

Svoboda, who proved that pollen packed into the cells by honey bees undergoes lactic acid fermentation, found that the amount of digestible proteins in air-dried pollen diminishes in storage: from the initial 46.7% in

2 years it has fallen to 14.9%, thus the food value of stored pollen diminishes with age. Recently, Maurizio demonstrated that even one-year old air-dried pollen loses much of its nutritive value. Our own experiments showed that two-year old air-dried pollen from pollen traps had an inferior nutritive value. Moreover, upon examination under microscope, freshly collected pollen appears full, while the air-dried pollen is wrinkled. Beebread pollen resembles the fresh pollen in its appearance.

To preserve the food value of collected pollen during storage, Svoboda decided to imitate the bees in their preservation of the beebread. After a number of attempts he finally devised a method which proved to be very successful. For the preservation of pollen one should use either a glass container or, still better, a crock with smooth straight walls. Prepare a solid wooden disc which can freely move inside the crock. Weigh the fresh air-dried pollen. Prepare a

honey solution by dissolving the amount of honey equal to 15% of the weight of pollen in the amount of water equal to 25% of the weight of pollen. Boil the solution for 5 minutes, and let it cool. Mix and knead well with the weighed amount of pollen, and fill, stamping very tightly. the crock, cover with the wooden disc. put weight on top (a stone) and let it stand in a warm place (about 96-97°F.). After 4-6 days remove the weight, the wooden disc, and seal the crock with a mixture of 3 parts paraffin and 1 part wax. Keep it in a cool place.

Whether the same or a similar procedure would increase the palatability of the pollen substitutes and to what an extent it could improve their food value only the future experiments will tell. I think, however, that adding Svoboda's "artificial beebread" to a good pollen substitute, instead of the dried egg yolk, would be a simpler, easier and a more convenient procedure.

THE NATIONAL HONEY SHOW

by H. J. RAHMLOW

We arrived in St. Petersburg, Florida on February 5 and on the 7th attended the State Fair at Tampa, mostly to see the National Honey Show and fruit exhibits. We were well repaid. Never have we seen honey displayed with more unity and beauty or with better design. The light honey was in the center of the 60-foot wide area. The dark honey was on the left and the golden colored on the right. Colors ranged from 0

over the full range of the Pfund

There were 60 exhibitors and 120 entries from 16 states in this national show under the auspices of the National Beekeepers Federation, from February 4 to 8, 1958. The Florida State Fair provided \$650.00 for premiums and also set up a \$1,000.00 budget for the Florida State Show from February 10 to 15, 1958. There were also ten beautiful silver trophies

donated by firms and individuals. There were 16 states represented in the National Show, with Florida having the most entries.

Mr. Fred Oren of Tampa, who was serving his 8th year as superintendent of both shows, said the committee had never seen a national show before and were afraid they might not do justice to it. They need not have worried.



Fig. 1—Fred Oren of Tampa, superintendent of the Florida State Fair Honey Exhibit, is looking at a National first prize jar of dark honey exhibited by Kurt Cipher of Mt. Clemens, Mich. In the rear is the "dark honey" section of the National Show.



Fig. 2—Millard Coggshall of Minneola, Florida, leoking at the 1st prize jur of "light" honey shown by H. R. Swisher of Springfield, Ohio. Mr. Coggshall was president of the Florida Beekeepers' Association for two years and represented the National Beekeepers' Federation at the Florida State Fair.



Fig. 3—The third prize-winning section of comb honey exhibited by Floyd Markham of Ypsalanti, Michigan. Mr. Markham is a large producer and served on the National show committee.

Honey from the Nations

There was also a very interesting exhibit of honey from 30 "Nations of the World" by Mr. C. Wade of Tampa. There was coffee honey from Guatemala which looked like our buckwheat honey; black locust honey from Italy, which was the lightest in color; and honey made during the "Midnight Sun" from Norway. A lady from Brazil said she could not send honey in anything but whiskey or beer bottles - the only kind they had.

Mr. Wade had obtained the honey from many sources, including importers and missionaries.

Show is Educational

As we approached the honey exhibit we noticed that Supt. Fred Oren and two associates, Mr. Millard Coggshall of Minneola, Fla. and Mr. Floyd C. Markham of Belle Glade, Florida were busy answering questions from fair visitors, as were Mr. and Mrs. Wade. There is no end to the number of questions fair visitors can ask or the interest of people in the fascinating life of the honey bee.

Fruit Show

Never have we seen so much fruit exhibited as at this State Fair. Each fruit growing county had a most beautiful booth of Florida fruits arranged in interesting designs.

The weather has been too cold for real enjoyment of the famous Florida sunshine up to this time, February 10th. It doesn't bother folks who live here and who have heated homes, because we simply do as we did up North—stay indoors and look out at it.

As for "something to do during retirement"—never have we been so busy or been "on the go" so much. There is no time to "sit in a rocking chair" unless you are the type who prefers to do just that. But think of the things you miss while you sit and rock.

Come to Tampa in 1959

Mr. Millard Coggshall, past president of the Florida Beekeepers Association who represented the National Beekeepers Federation at the Florida Fair, invites all beekeepers to attend the National meeting in Tampa in February 1959, and bring honey exhibits to the National Show which will again be held at this fair next year.

Mr. Fred Oren told us that he was sending a complete list of winners in the National Honey Show to this magazine, so we will not list them at this time.

To Harold Clay on His Retirement

For several decades, "headquarters" for all who had reason to go to Washington has been the office of Harold J. Clay. The dictionary defines "headquarters" as the center of operations and authority, and the office of Harold Clay was exactly that. Genial and affable, Harold Clay sat behind his desk and its inevitable pile of paper work, and, no matter what the cause or reason for the visit, took time to help, council, and advise with authority anyone on matters relating to bees and honey. And it should be clearly and definitely stated that he did this many times in the best interests of the bee and honey industry even though it did not enhance his position in Washington's bureaucratic circles.

Harold Clay retires in April of this year for reasons of health. The bee and honey industry wishes Harold many happy years of retirement with Mrs. Clay, and expresses to him its sincere appreciation for his many years of service to this industry.

Whether the office which Clay leaves will continue to be "head-quarters" for the industry is a mute question. But life always goes on and time and change always occurs, and new friends are made where old ones once were. Still, the many who felt themselves friends of Harold Clay, for a long time, will not go to Washington without sincerely missing him in many ways.

Harold and Mrs. Clay are planning a long vacation trip to Florida. They have been made life members of the Florida Beekeepers' Association and they expect to attend the next annual meeting of the American Beekeeping Federation in Tampa, Florida in 1959. Wherever they may be, you can be assured that, in addition to his keen interests in flowers and other things, he will always find time to be interested in matters concerning bees and honey.

At the last annual meeting of the industry in Columbus, Ohio, he was honored and presented with a token of appreciation. In his remarks he stated that he felt the industry should know why he was retiring. What he said is repeated in effect here as an example of the fine character Harold Clay is.

He said he went to see his doctor, in fact, he went to see three doctors because he didn't like what the first two said.

The first doctor said, "Young man,



I'm going to tell you what is wrong with you in metaphore. My little girl fell at school and knocked out two of her front teeth. When she came home, she said, 'Daddy, if this keeps up, I'll be running on my rims.'"

The second doctor looked him over and said, "Son, I don't know just what is wrong with you, but, if you were a building, you'd be condemned!"

And the third doctor said, "Boy, you've got Sanka bean! That means that everything of value has been removed from the bean."

To Harold Clay in retirement, we wish many years of happiness with Mrs. Clay and again say many thanks for so many, many helps over so many, many years. The industry always will have good friends in Washington but there never will be another Harold Clay.

Spotted Alfalfa Aphid

Destructive insects are always a threat. Now it is the alfalfa spotted aphid, which entered New Mexico, presumably from the Far East, in 1954 or earlier.

Kansas reports as much as millions of dollars of damage in 1956, with a lesser amount in 1957 owing to unfavorable weather for the trouble maker. It can be controlled by insecticides (which are expensive); lady-bugs are good. Just now efforts are being made to develop resistant Buffalo alfalfas, with some success, according to Kansas—State News Bureau.

THE CHECK-OFF SYSTEM

(Continued from Page 144)
State Advisory Board, a levy of about seven-tenths of one per cent of the value of their marketings. There seems to be no reason why a check-off of the same size should not be paid on honey marketed through packers or dealers in other states. With this contribution on a million cans (about a fourth of the total national production) you would have your \$70,000 fund.

This type of contribution is a tax-deductible business expense so your net out-of-pocket contribution would usually not be more than 5c per can, or about five-tenths of one per cent of your gross honey receipts. If all beekeepers who sell honey in sixty-pound cans would authorize their buyers to make a deduction of seven cents per can and all packers and dealers would also participate, the sacrifice will be far more equitable than if promotion is financed from contributions made without direct regard to the volume of business.

To summarize: You should decide
(1) whether you wish to revitalize
the present Check-off Plan; (2)
raise the Check-off rate to something
more in line with the rate under the
California Marketing Order; or (3)
coordinate your Check-off Plan with
the efforts of the Institute and the
California Board. You may find it

advisable to substitute a lump-sum contribution from the Check-off Plan to the Honey Institute for individual contributions.

Modern economy is complex. Consumers are far removed from producers. Many cannot solve their merchandising problems by marketing to neighbors or by personal visits to community stores. Now, most of the people here live in cities and suburbs, beyond personal reach. It takes experts and specialists to make the majority of our people honey conscious. Moreover it is in the large eastern population centers where honey consumption is low. The point of attack for merchandising and advertising is there.

"Flies" on a Charcoal Grill

In a suburb of our town where there are acres and acres of new houses, very few fences and no trees, a newly wed couple left their charcoal grill where they were using it, about 20 feet from their back door. This was the only thing that a swarm of bees could find to light on one afternoon. When the man of the house, groom, arrived home that evening, the young bride immediately escorted him to the back door and exclaimed: "Just look at those flies on our grill, isn't it sickening?" Tom Hahn

Topeka, Kansas

Bakery Goods Being "Honeyed" Up

With an eye to expanding the use of honey in commercial bakery products, Kansas State College researchers, Manhattan, Kansas, have found that substituting honey for all or part of the sugar in some baked goods adds to their color and flavor and improves their texture.

Cakes with a high concentration of honey stay moist and fresh-tasting longer than do cakes made without honey. But if more than a third of the sugar is replaced, preparing cakes by a simple substitution of honey for sugar sometimes causes difficulty. A reaction of honey acids with baking powder as the batter is mixed may lead to low cake volume. Also, an intense browning reaction may occur during baking and give the cake a burned color and flavor. Extra soda cannot be added to increase cake volume, because it hastens undesired browning.

Researchers found they could control this browning reaction by raising the acidity of the cake batter in the final stages of baking. To do this, they used potassium bitartrate coated with a stearate, which melts and releases the acid near the end of the baking time. Excellent cakes in which all the sugar was replaced by honey were produced by this method.

Honey noticeably added to the flavor and color of some cookies. Because honey gives the cookies a chewy quality, only enough to replace 5 per cent of the sugar was used in crisp cookies. Even this small amount gave added flavor to sugar cookies and vanilla wafers. In chewy cookies, such as fruit bars and brownies, honey was used to replace over half the sugar.

The bread-making process did not need to be altered when honey was substituted for sugar in bread and rolls in the tests. Honey substituted for 6 per cent of the sugar in white breads and up to 12 per cent in dark breads imparted a rich flavor and aroma to both.

(from the "California Farmer")

Minnesota Rules and Regulations

A pamphlet issued in 1957 by the Department of Agriculture, Dairy and Food, Division of Marketing Services, Byron G. Allen, Commissioner, 568 State Office Bld., St. Paul 1, gives the rules and regulations for honey grading, apiary inspection, and honey house sanitation. The pamphlet contains sixteen pages. Copies may be obtained at the above address.

Because honey must now be properly graded and labeled, Regulation 2, page 10, is of particular interest. Those ordering honey labels should call their printer's attention to this regulation. Proofs of labels should be submitted to the Department for approval before final printing.

Registration of apiaries is required under these regulations not later than June 30 each year with registration fees at a minimum of \$1.00 for less than 20 colonies and five cents a colony over that with a maximum of \$100. One half the money so obtained is expended for carrying out the provisions of the regulations and one half is allocated to the University of Minnesota for research in bee diseases.

Honey Trade U.S. To Canada

The Canadian Beekeeper in its Nov.-Dec. number reports considerable dissatisfaction over importations of honey into Canada from the U. S. as well as other countries. While much of the honey imported is of fine grade there is sufficient of lower grade to prove a problem to Canadian producers and packers.

The magazine recommends that the Canadian government insist that such honey as is imported in consumer packages abide by the same regulations as to color, grade, quality and markings as native Canadian honey, with no other descriptive printing.

Also they feel that the country of origin should be clearly marked on all packages, whether they are filled abroad or in Canada, to avoid the "palming off" of lower grade honey in retail packages or the mixing of such honey with home-produced stock without any reference to origin on the packages.

This would, naturally, require federal action, both on such regulations as well as on grading and labeling.

The situation is aggravated from the fact that the 1957 Canadian crop was in excess of 31 million pounds, 29 per cent above the 24 million 1956 crop.

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UNDER



CURRENT

Well, well. Folks must be too busy to bother with thoughts of the future. Anyway we only had five contributions for this topic. Some of the rest of you readers get into the act. Why not? Contributions should be short. Try to get your answers to American Bee Journal, Hamilton, Illinois "Undercurrent" before the 20th of the month. For the answers published, subscriptions will be extended one month per type inch. Subjects for "Undercurrent" are welcome. What do you think should be discussed?

Subject For This Month

How Can We Substantially Increase Honey Production with Colonies As They Are Today? (Suggested by Cocil B. Hoy, Armstrong, B. C.)

ANSWERS

Ronald Wulff Charles City, Iowa

No one thing we can do will substantially increase production, but by experimenting we can learn to do several things that will increase our crop. We need to experiment because each area is different and the experience of others may not work out for us. A few details of management that we can work on would be yard size, feeding, supering, and how often to requeen.

Simple record will aid in intelligent management. We need to keep close track of expenses at the same time we are attempting to increase production. Record the dates when each honey plant blooms. The average of a few years is valuable for reference. We also number each hive and record the age, stock, and source of each queen. We can then readily see the difference in performance of different strains of bees. We also clip the queens so we know when supersedure occurs.

Roger H. Heywood Council Bluffs, Iowa

Many beekeepers do not seem to re-

alize the importance of good queens. They tend to be content to let the bees requeen themselves by supersedure.

Good combs are very important also. Some beekeepers allow crooked and sagged drone combs to remain in their colonies. More beekeepers should realize that foundation, to permit the drawing of new and better combs, is cheap at twice its cost.

The need for sufficient room for brood rearing is often overlooked. A plentiful supply of honey and pollen for winter is also lost sight of.

To sum it up: By having good queens, good combs, plenty of honey and pollen you have more bees when the main honeyflow comes. This will increase production considerably.

Julius Lysne Stockholm, Wisconsin

One should use the best modern factory-made hives and equipment. Requeen colonies each year. Hybrid queens have proven their worth and they add to production. It is now possible also to combine the operations of feeding, requeening and swarm control every spring. A very strong colony headed by a prolific queen and given ample food and room will seldom give swarm trouble. (We cannot afford to waste time with defective and ill-fitting equipment.) Bees deserve proper care. The "let'em alone" man

never makes good with bees. Better methods are here. Use them.

Cecil B. Hoy Armstrong, B. C.

Most beekeepers are inclined to take for granted that their pollen reserves are ample when, as a matter of fact, colonies may be deficient in pollen in most honey producing regions. It is the weak link in the long chain of apiary management for honey production.

If we are to increase production substantially with colonies as they exist today we must feed a proven pollen substitute early enough in the season to have two standard supers full of young bees ready for the beginning of the buildup period.

Late answer to March question— How to Encourage Young People

Paul Becket Kentfield, California

I think young people could be encouraged into the field if they were given summer jobs or a push by some beekeeper to get them interested. Working with an experienced beekeeper would give them the much needed confidence. Also, get them to read a magazine such as A.B.J. to give them hints on getting started. Once they do get started they will become experienced and more interested and go on their own getting returns for their own efforts.

Subject for the May "Undercurrent," suggested by Thomas Doonan, Des Moines, Iowa
How Can We Increase the Demand for Honey Outside the "Pancake Months"?

Yellow Italian Bees and Queens Known the world over for their gentleness and heary producing ability. We guarantee prompt, safe delivery. Health certificate assured. Shipping starts April 10.

2 lbs. with queen \$3.50 3 lbs. with queen \$4.50 Young Queens \$1.00 each, airmail

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QUEENS PACKAGE BEES

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How To



Address "How to Do It, American Bee Journal, Hamilton, Illinois."

Number one item will get a three ar subscription extension; numbers 2, 4 a full year; 5, 6, 7 a six months' extension. Balance two months each.

Number One

Mirror Reflection to Recluster Bees

Did you ever visit one of your bee yards, and about the time you arrived a big swarm was in the act of breaking cluster ready to go to the timber or some unknown place? If so the next time this happens, have a large mirror with you (the larger the better) and while the bees are circling around, hold the mirror where it will reflect from the sun on the flying bees and they will recluster quickly. But be careful as they may cluster on the person holding the mirror. They will go to the mirror as they will a light at night.

Harry E. Dale Herrin, Illinois

Number Two

To Pour Honey Out Of A Five Gallon Can

No drip, no mess, no fuss. Loosen the cap and then place can on stand with the mouth down and receptacle to be filled under the mouth. Gradually loosen the lid being careful to hold the left thumb on the lid while unscrewing the cap with the right hand. When the lid is completely loosened, lift it from the bottom as if opening a faucet gate being careful not to remove entirely from the can. The amount of flow can be controlled easily by the size of the opening. When the container is filled, the flow of honey can be stopped easily by closing the lid of the can like you would a faucet gate. A twist of the lid enables one to remove the filled container and you are ready for the next one. This works well for either honey, oil or another liquid. S. Joaquin Watkins

Fruita, Colorado

Number Three

A Trick in Supering For the production of extracted honey use standard equipment and nine combs in each body. When the hive is unpacked in spring, reverse the two stories so there will be brood in both bodies. Just before fruit bloom lift off the two bodies and place an empty super of combs on the bottom board. Bees should only be allowed the bottom entrance. The three bodies should be enough for the following two weeks. When room is needed again, place another super at the bottom. This means that the queen will be driven down at the start of the honeyflow and the brood will be at the top for easy inspection. A quick check for queen cells can be made at any time. No queen excluder is used.

Julius Lysne Stockholm, Wis.

Number Four

Extra Profit

When you work your bees take along two or three gallon buckets with covers and as you scrape off burr comb from frames, inner covers. and so on, put the burr comb in the buckets. At the end of the day put all of this wax in your solar melter. Next day you have a nice chunk of beeswax. This is just extra profit from your bees.

C. A. Von Harten Evansville, Indiana

Number Five

Paint to Preserve Cans and Covers

Paint the inside of your friction top cans and covers that you use for feed with aluminum paint to prevent the tin from rusting. Allow two or three weeks drying time after applying each coat. Pails treated this way keep the feed free from rust and the pails should last longer.

Robert Annoye Casco, Wis.

Number Six

To Get Rid of Skunks

Skunks are fond of bees as well as of eggs. So break an egg into a shallow tin can, add a pinch of strychnine. stir thoroughly, and place near the entrance of the hive. Next morning you will have him without fume or furs.

Noble S. Gladish Nashville, Tenn.

Number Seven

Fir Bark for Fuel For smoker fuel I often use fir bark

(or something similarly durable) to save time. In the dry season it was a puzzle to handle this fire when I was through in the yard. Now I just load up the smoker and plug the top draft with green leaves to smother the fire. When lighting up I use three small tight wads of paper, one of which is waxed and placed below the chips which then light easily.

James Warmington Yamhill, Oregon

Dehorner as Fuel Cutter

Note Wightman's "Rope for Smoker Fuel" in February. I have an easy way to cut the rope (or burlap or what have you). I use a cattle dehorner. You will be surprised how good this clipper works. Any farmer would lend a beekeeper one especially if he gets a jar of honey for the use of it. Or they may be bought on the market for not too much money.

Albert Trapp Maribel, Wis.

> **Emergency Combs without** Foundation

If we happen to run out of foundation during a honeyflow we take off as many supers as we need and cut all the combs of honey out of the frames, being careful to leave about a fourth of an inch of comb at the top. About nine times out of ten the bees will make fairly straight combs from these little starters in the frames.

Louis Foester Port Lavaca, Texas

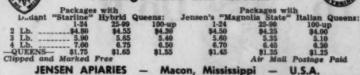
> Pop Bottle Caps To Close Holes

Dave Elliot of Timnath, Colorado uses the caps of pop bottles to close unwanted auger hole entrances. The size of his holes is such that a pop bottle cap covers them nicely. The flared edge of the bottle cap holds it in place. When he desires an upper entrance, he merely removes the bottle cap. These caps can be obtained free from most places where pop is sold.

(from Colorado B-Notes)

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		10 25	25 10 100	100 Up
2 lb	o. packages	4.50	\$4.25	\$4.00
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For extra pounds of bees add \$1.10 per pound
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	Starlines	Italians	2-lbs.	3-lbs.	4-lbs.
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Favorite Recipes



Honey Congo Bars

"Lush Confections" 30 bers

pound Honey graham crackers (equals 1% cups crumbs)

can sweetened condensed milk (not evaporated milk)



Luscious California fruits combined with Honey Dr perfectly they become a conversation piece. Even t etites will perk up at the sight of this colorful me For six servings you will need: One No. 2½ can of ined, 3 sliced oranges; wedges of fresh apple with

HONEY FOR FRECKLES

Half a pound of honey

2 ounces of glycerine

2 ounces of alcohol

6 drams citric acid

15 drops ambergris

Apply night and morning.

Mrs. A. J. Armstrong Pocatello, Idaho

CARROT-ORANGE HONEY

Squeeze the juice from 2 oranges and I lemon. Grind the rinds and boil in water until tender. Add 2 cups ground raw carrots and two cups water. Measure and add 1 cup honey to each cup of mixture, then add orange and lemon juice. Simmer until at jelly stage. Mrs. Ward Kruse

R. No. 1, Sherwood, Ohio

HONEY PUMPKIN PIE

11/2 cup steamed pumpkin

1 cup honey

1 teaspoon cinnamon

14 teaspoon ginger

3 eggs

1 cup milk

1/2 cup cream

1/2 teaspoon salt

Mix in order given and bake in one crust. Serve with whipped cream topped with one teaspoon honey. Makes a large pie. Mrs. John Larson,

Taylors Falls, Minnesota

FOR COLDS

Boil 2 ounces of flaxseed in a quart of water; strain and add 2 ounces of rock candy, ½ pint of honey, juice of 3 lemons. Mix, and let all boil well. Let cool and bottle.

Dose: 1 cupful on going to bed, 1/2 cupful before meals; the hotter the better.

Mrs. A. J. Armstrong, 626 N. 11th Ave., Pocatello, Idaho

HONEY COOKIES

1 cup sugar

2 tablespoons hot water

2 teaspoons ginger

1 cup honey

2 teaspoons soda

% cup flour

Mix these ingredients and stand overnight. When ready to bake, add flour enough to make a stiff dough. Roll into small balls and bake in moderate oven until light brown.

Mrs. Chesley Harbo Grove City, Minn.

"Say, honey, what makes you sell so sweet?"

" [] ... glamour in glass!



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WHEELING, WEST VIRGINIA

CONTINUING THE FEDERATION CONVENTION—Reporters: Robert Banker, Roy Grout, Lee Stewart







Pictures by Sid Mendelson, East Avenue, Akron, Ohio

The talk on honey bee allergies by Prof. G. F. Townsend was unusually interesting, particularly the part that pertained to stings. He discussed the reactions of pollen in asthma and hay fever and said these reactions could develop when working bees or in the honey house where there was bee equipment. He told us there were two different reactions from stings, the one commonly recognized by accompanying swelling and the more dangerous kind that results in itching, vomiting, difficult breathing and choking. This reaction may occur within five minutes after being stung or may not occur for 24 hours. It is not the acid or venom in the sting that does the damage but the protein, as in pollen. If one is so affected by stings, he should immediately see a physician upon being stung and be treated with adrenaline. If unable to immediately get to a doctor, strong doses of an alcoholic drink are beneficial.

Anyone so affected by bee stings or pollen reaction should take preventive treatments under the care of a physician. The best prevention is a sterilized compound of pulverized bees and a saline solution. The proper dosage must be determined by trial; one dose may be sufficient or it may take many. Injection is better than oral treatment. The immunity is effective for all insect stings and bites.

The marketing phase of the program was good. This resulted in the plan to automatically deduct 3 cents a can at the producer and 3 cents at the packer level with 4 large packers agreeing to it. This possibly could result in \$100,000 being raised which would be a sum large enough to really do some good.

It was pointed out by a couple of the big packers that honey prices were not as good as they were a year ago, mainly due to higher interest rates, the present recession and caution among the packers and the dumping and price cutting of producers and packers as well. The foreign marts used to purchase a year's supply of honey at a time but as their import laws have been liberalized they are now buying as needed and where they can get the best price. The foreign demand looks good and can be improved by offering a honey of better quality, one of less moisture content and better flavor. The foreign trade should be educated to the goodness of our white honeys; they now use the amber or darker grades. Market conditions are not bad and they will remain good if we market our honey in an orderly, cooperative manner.

RESOLUTIONS

There were nineteen resolutions and this summarizes the most important ones:

Since the cost of producing honey has increased materially because of increases in the cost of labor and supplies, the present support price is inadequate, so it is resolved that the parity support on honey be increased to not less than 80%.

Since there is at present a surplus of honey in the hands of beekeepers and there is no satisfactory export market, it is resolved that the Export Subsidy Program be reestablished with a payment of not less than 2½ cents per pound.

Because the consumption and distribution of honey has changed, due to a shift of population to the west and retail prices are substantially the same both in the East and the West, it is resolved that the price differential be eliminated as it is no longer justified.

Because all honey producers and dealers are interested in the promotion and sale of honey, it is resolved that the Check-off Plan be automatically and universally adopted by all packers and dealers and that the funds be used by the National Council for research and promotion.

Also be it Resolved:

That an import quota be established on all honey imported with importation not to exceed the yearly average of the past ten years.

That the expiration date of loans under Price Support be extended three months and that a resealing plan be included in future programs.

That the American Committee of the Bee Research Association cooperate with the Federation Research Committee on a research program.

That the presidents of the Apiary Inspectors of America and the Federation appoint a committee of five to obtain funds for a professional apiculturist to study the spread of acarine disease and if necessary set up a plan of action in case of the introduction of the mite.

That the Federation approve research to establish true values for royal jelly and that the Bee Breeders Association support this action and also discourage unsubstantiated publicity on royal jelly.

That the Federation encourage the establishment of State Marketing orders. That proper officials in the U.S.D.A. be responsible for research in chemicals to safeguard this industry and that support be given to an effort to establish a laboratory in California to study the losses due to insecticides and pollination problems.



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Extra CL	OVE	RL	INE	queens	1.25	each

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ALVIN J. DUCOTE

Hamburg, Louisiana



MEETINGS HERE and THERE



Pennsylvania Short Course, August 18-22

The one week short course in beekeeping at the Pennsylvania State University will be given this summer from August 18 to 22 inclusive. Mark this date in your calendar now and plan to attend. It will be a pleasant and profitable week for you. For more information, write to D. R. McClay, Director of Short Courses, Armsby Hall, University Park, Pa.

E. J. Anderson Penn. State

Connecticut Annual

Hartford, April 26
The Connecticut Association will hold its annual meeting April 26, at the Y.M.C.A., corner of Pearl and Jewel Streets, Hartford, Lunch will be in the Y.M.C.A. cafeteria. Election of officers for 1958 and other business to come before the meeting will take place.

Our featured speaker will be Dean W. B. Young, Dean and Director of College of Agriculture, University of Conn., Storrs, Conn. Dean Young's talk will be about the curriculum in the College of Agriculture.

Two friends from Hungary are to tell of beekeeping and the production of royal jelly in their native Hungary.

Beekeepers and friends are invited to attend. The program promises much information and a good time.

Philemon J. Hewitt, Jr. Chairman, Publicity

> Northeast Kansas First Sunday

Wyandotte Court House The Northeast Kansas Association holds its regular meeting on the first Sunday of the month at 2:30 p.m. at the Wyandotte County Court House, Kansas City, Kansas, November through May.

Westchester County (New York)

New Rochelle, April 20 The Westchester County Association will hold its next meeting at the Odd Fellows Hall, 20 Lockwood Ave., New Rochelle, N. Y., on Sunday, April 20th at 2:30 p.m.

Topic of discussion will be "Swarm Control" and "Toxic Sprays." Expert beekeepers will be on hand to answer bee problems.

Refreshments will be served at the close of the meeting.

Mrs. Alfred Roth, Pub.

Montgomery County (Pa.), Flourtown, April 26 The Montgomery County, Pennsylvania, Association will hold its spring meeting at the Presbyterian Church in Flourtown, Route 309, April 26th at 8 p.m. Our speaker will be Paul Holcombe: Slides and an open discussion.

Mrs. A. C. Storm Secretary

Southern States Conference and American Beekeeping Federation and National Honey Show January 25 - 31, 1959

The week of January 25 - 31, 1959 will be one of much "buzzing and humming" at the Hillsboro Hotel in Tampa, Florida. According to present plans, the Southern States Beekeepers' Conference will meet Monday, January 25 and the American Beekeeping Federation will meet the rest of the week, January 26 - 31.

In 1947 there was a similar joint meeting in Tampa, which resulted in the largest attendance at a national beekeepers meeting before or since. Plans are now being made which will make the 1959 meeting even bigger.

The National Honey Show will be held the following week at the Florida State Fair in Tampa. So plan now to bring some good honey when you come.

Watch the bee journals for further information.

Millard Coggshall

International Congress Rome, Sept. 18-23

Sketch of proceedings of the International Congress of Beekeepers to be held in Rome Sept. 18-23 are available by writing to Secretary, Int. Congress of Beekeepers, Corso Vittorio Emanuele, 101, Rome, Italy.

Immediately preceding the Rome meeting will be the scientific meeting of the Congress at Bologna on Sept. 15 to 17.

The Congress will be divided into six separate parts:-

- 1. Beekeeping and Technology of Bee Products
- 2. Bee products
- 3. Use of Bee Products in Therapy and Medicine (honey, bee poison, royal jelly).
- 4. Apiculture and Agriculture
- 5. Control of Bee Diseases
- 6. Beekeeping Economics, Org. Legislation

Eastern Missouri Officers

The Eastern Missouri Association held its regular meeting Tuesday evening, November 5th, at the County Court House in Clayton. Election of officers was held and the following were elected to serve for 1958. President-Ray Reinhold 1st Vice President-John Morden 2nd Vice President-Herman Leely Secretary-W. Wallace Daugherty Treasurer-Kurt Simon Trustee 3 years-George Nagel Trustee 2 years-Julius Simon Trustee 1 year-Herman Meyer

W. Wallace Daugherty Secretary

Cantrell New No. Georgia President Frank M. Cantrell has been elected 1958 president of the North Georgia Beekeepers' Association.

Other new officers are W. H. Mc-Cain, 24 Fourth Ave., NE, first vice president; F. E. Teal, Stone Mountain, second vice president; William S. Sharp, 608 Third Ave., Decatur, treasurer; James Rochel, 1241 Atlantic Dr., NW, recording secretary, and Mrs. William S. Sharp, 608 Third Ave., Decatur, corresponding secretary.

Kansas State Beekeepers' Day Now in March

At the recent meeting of the Kansas State Association during Beekeepers' Day at Kansas State College it was voted to have this day the second Saturday in March beginning in 1959.

Empire State Honey Producers'
Association Officers

At our recent convention, held in Syracuse December 6 - 7, the following officers were elected:

President, Howard B. Webb, Port Crane

1st Vice-Pres., Everett Clark, New Hartford

2nd Vice-Pres., Raymond Churchill, Watertown

3rd Vice-Pres., Harry Gable, Romulus Secretary-Treasurer, Mary Trippe, Syracuse

Field Secretary, Dr. E. J. Dyce, Ithaca: Dr. Roger Morse, Ithaca Mary Cary Tripp Secretary

South Arkansas Elects

At their mid-winter meeting at Camden, February 1st, the South Arkansas Association elected as their new set of officers Bert Helderbrand, President, Camden; Homer W. Richard, Eldorado, Vice President, and Mrs. Ralph Barton, 2311 Shepherd St., Secretary. This is a very energetic group and we are expecting increasing interest and enthusiasm in South Arkansas.

Ray L. McLester Reporter

Midwestern, Kansas City, Mo., April 13

The Midwestern Association will meet at the I. O. O. F. Hall, 812 Westport Road, Kansas City, Missouri, at 2:30 p.m., Sunday, April 13th. Among the subjects to be discussed will be the installation of package bees, dividing colonies and stimulative feeding. A film will be shown after the meeting. Refreshments served by the Ladies Auxiliary. Everyone welcome. C. L. Barrett, Secretary

Honey for Breakfast Week

April 6 - 12 Honey for Breakfast Week, sponsored by American Honey Institute, Madison, Wisconsin, begins Easter Sunday. If you are in any way directly concerned, as an individual or one of a group like an association, write to the Institute for suggestions and publicity material for Honey for Many shoulders Breakfast Week. to the wheel will give American families one more push into the health that honey brings. Remember also that National Honey Week will be Oct. 27-Nov. 1 and that it is the last big push for the year. Make your plans now for participation.

Rhode Island Honey Cookery

Big Success
As part of the Apricultural Society of R. I. honey promotional activities

in conjunction with the R. I. Farm and Home Show Program a Honey Cookery Awards Contest was held in the ballroom of the Cranston Street Armory on the evening of March 6th. This program received overwhelming support from beekeepers and members of the 4-H who entered as participants in the various divisions of the contest. Judges for the contest were Miss Violet Higbee, Head, Home Demonstration Agents. University of R. I., Mrs. Ella Simas, Metropolitan Providence Home Demonstration Agent, Miss Gertrude A. Cooke, VA Hospital Dietitian, Providence and Mrs. Ralph Platt, Chief, Bakery Department of the sponsor Participants in the contest ranged in ages from 10 to 60 and there were 63 entries in the three divisions, cake, cookies and candy. Contestants made their own choice as to the product to be prepared but the minimum requirement was that the contestant use at least 1/4 cup of honey as a sweetening source.

After the judges had finished their tremendous task of deciding the winners because of the superiority of all the products entered, the general public, who witnessed the program, were invited to sample the entries. This created a flurry of sales for both honey and the Old Favorite Recipe Book and it was reported that over 267 cook books were sold during the four day run of the show.

The Society was proud and pleased at the accomplishment of its own 17 year old recording secretary John P. Card whose honey layer cake with uncooked honey frosting took first award in the cake division. Awards were presented by Mr. John Riley representative of the sponsor. Lucky winners were: Class "A" Cake: John P. Card (beekeeper) 1st, Miss Karen Dexter (Northern 4-H) 2nd, Brian Donle (4-H Mass.) 3rd, Miss Mary Roderiques, (Eastern 4-H) honorable mention: Class "B" Cookies: Miss Sadie Escobar (Eastern 4-H) 1st, Kenneth Horrocks, (4-H Mass.) 2d, Miss Judy Kelley (Eastern 4-H) 3rd, Miss Johnne Amadon, (Northern 4-H) honorable mention, Miss Louise A. Lauterbach, (Eastern 4-H) honorable mention; Class "C" Candy: Mrs. Beatrice Twitchell (Northern 4-H) 1st, Miss Johnne Amadon (Northern 4-H) 2d, Miss Geraldine Goepfert (Northern 4-H)

3rd, Mrs. Bernadine Segar (beekeeper) honorable mention,

Pollyjo Crawford (4-H Mass.) honor-

W. K. Davis, Pres.

able mention.

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1 - 24 24 - 49 50 & over 2 lb. w/Q. \$4.15 \$3.95 \$3.75 3 lb. w/Q. 5.05 4.85 4.75 3 lb. w/2 Q. 6.05 5.85 5.75 1.50 Queens 1.40 1.25

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We have spent years developing and improving our present strain of bees. Breeding stock is tested and proven in our own honey producing apiaries. You will find our bees pleasing in appearance, easy to handle and tops in production.

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	- PRICES	10 - 49	50 - up
2 lb. pkg. with young lay	ying queen\$4.25	\$4.00	\$3.75
4 lb pkg, with young lay	ying queen	5.10 6.10	4.85 5.85
Extra Queens	1.40	1.30	1.20

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THE IMPROVED STRAIN of three-banded Italians, backed by over 35 years' careful selecting, breeding, and shipping to all points in U. S. A. and Canada. Each year our breeding and mating stock is carefully picked and tested out for the coming season from hundreds of best by test colonies, which gives you benefit of each season's improvement when buying from us.

We are booking orders for the season of 1958, plan your requirements for this season and place your orders early.

We are booking each day from now on to fill your orders promptly on the day you want them with the very best of QUALITY BY TEST. Let us know your 1958 requirements, We guarantee to please you in every respect or money cheerfully refunded. Shipment guaranteed on date you desire. We can take care of your rush orders from March 15th on. No disease. Health certificate with each shipment.

Orders booked 25% down payment to confirm, balance due 10 days before shipment.

,	- 24	Queens \$1.25	2-Lb. Pkg. with Queen \$4.00	3-Lb. Pkg. with Queen
		1.15	3.75	4.75
100	up		3.50	4.50

Royal Jelly A Specialty — Aides human health in many ways — write for special information and prices.

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TELEGRAPH AND EXPRESS OFFICE - DOTHAN, ALA.

The Scramble A Contest



MARCH SCRAMBLE-

Carl E. Killion, Paris, Illinois

Carl has many friends country wide. However the total number of contestants was less than in February. Here are the fun titles: Winner of the Blue; Honey Comb Baby; King of Section Comb Honey and Tip-Top Bee Man; Master of Fancy Honey; Comb Honey Wizzard; Comb Honey; Comb Honey King, Hope this doesn't go to your head, Cari. Pass these titles on to Eugene. One contestant says: "If my memory serves this picture has not appeared for 15 or 20 years in the Journal." How wrong can he be! But - Carl go get another picture. H'm?

February Winners for John Holzberlein

Number One

A. Mousty, Neuville (Philippevile), Belgium

John Holzberlein, Jr., from Meeker, Colorado, well known for his production of honey and for his selection of queens. He has between 1000 and 2000 colonies of bees. He is a: "Protagonist of Modern Methods."

Number Two

William Jacob, Schenoctady, N.Y.

The Scrambled Person in February is John Holzberlein, Meeker, Colorado, a commercial beekeeper with between one and two thousand colonies. He is also active in state and national affairs. I call him "Meeker's Worker Bee."

Number Three

Mrs. Wm. Wicht, Hattiesburg, Miss.

John Holzberlein is a well known name. He toes the mark and expects everyone else to do the same. Meeker, Colorado, is his home; commercial beekeeping is his bone. "Conscientious Watchdog" would suit him fine, because between just good queens and fine queens he draws a wide line. Oh yes, a hunting lodge he does run. The birds and bees are then forgotten when hunting is such fun. Editor - Pat Diehnelt



Scramble For This Month

Scramble For This Month

Remember, if you once take part in this contest there is no rule that says you must stop there. You may take part as often as you wish. Those who have not played our game, come on in. You may be the "grand prize" winner! Commenting on our contests, Reuben Koenig, Ceylon, Minn. says: "This is an excellent way of getting readers like me to know something about the men and women behind the many fine articles in ABJ."
Thanks, Reuben — Now, who is this new well known member of our chosen industry? Send your answers addressed to "Scramble, American Bee Journal, Hamilton, Ill.," anytime in April. I will judge the winners and they will be announced in June. For the best answer, a three year subscription and choice of a book; second, a two year subscription; third, a one year subscription four next, four months each. Who is this new person? Where does he live? What does he do? What fun title do you bestow on him? Good going.

Number Four

Almyer Jones, Malden, Mass.

John Holzberlein, Meeker, Colo., commer-"The beekeeper's Dutch beekeeper. Uncle." If ever a man talked to the beekeepers of this country with fatherly interest and with authority, for their own good as would a Dutch Uncle (which coincidentally we suspect he is) that man is John Holzberlein. His address a year or two ago to the American Beekeepers Federation on "What's Wrong With Beekeepers?" was a masterpiece.

James E. Glover, Corpus Christi, Texas

This man is John Holzberlein, Meeker, Colo., honey producer and queen raiser. He is a "Connoisseur of Fine Queens."

Number Six

Paul A. Watson, Burlingame, Kansas

Holzberlein (Meeker, Colo.,) operates between one and two thousand colonies and he is the most outstanding man I know of in the selection of queen bees. Let his handle be: "The Einstein of Queen Bee Selection."

Number Seven

Albert Molnar, Cleveland, Ohio

John wrote an article on "The Wax Moth in the West" in the April 1956 ABJ and he wrote "What the Honey Producer Wants When He Buys Queens," in January 1958, reprinted from April 1952 ABJ. I'd call him: "The Common Sense Businessman."

Number Eight

R. S. Harker, Rose Hill, Illinois

John is a large beekeeper, at Meeker, Colorado. I'd call him: "Colorado's Tireless

Number Nine

James A. Porter, Canadian, Yexas

John Holzberlein, Meeker, Colo., is active not only in beekeeping but in state and national affairs. He loves to hunt and fish. One time in this occupation he got lost from his car and had to spend the night in the woods. So we might call him "John, the Night Owl."

Nice going, contestants. Now let's go on

QUEENS

Italians — Caucasians

1 - 24 25 - 99 100 up 2 lb. pkg. w/q \$4.30 \$4.25 \$4.00 3 lb. pkg. w/q 5.40 5.30 5.00

Nice, large Quetas 1.25 1.15

Again, this season we have enlarged our queen yard to fill your orders promptly. So send us your order for 1 or 1000. Also producer of Royal Jelly.

Galvanized metal feeders, fits like a frame in the hive, \$1.60 each, A lifetime feeder without leaks.

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Best assurance for good honey crop is young laying Carniolan or Caucasian queens. They are the answer for gentleness and production. Booking orders for early March. QUEENS—1 to 49—\$1.40, 50 to 100—\$1.30, 100 up \$1.20.

No packages this season.

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2-lb. package w/queen ... \$4.00 3-lb. package w/queen ... 5.00 Queens by air mail \$1.25 Have few more open dates for April.

Carlus T. Harper New Brockton, Ala.

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ITALIAN QUEENS

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100	an	d Up	11	11	13	0	15	d	1.25

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Bulk & Capsules Write for prices

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2 lbs., with queen.....\$3.59
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Health certificate and live arrival
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Deduct \$1.10 for queenless pkg.
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Italian and workers that are quiet, pleasing to the eye, and industrious.

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THE GOLDEN APIARIES Italian bees. 3-THE GOLDEN APIARIES Hand Dees. of lbs. with untested queen, \$4.20 each; 4-lbs. with untested queen, \$5.00 each. Queenless packages, deduct 80c per package. Live delivery and a health certificate with shipment. Maurice Roy, Hessmer,

SEND OR BRING cages. Will supply bees for seventy cents pound. Can supply queens or new cages. Write for informa-tion. A. V. Dowling, Valdosta, Ga.

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FRAME ELECTRIC extractor used 1 yr., box control electric capping knife, capping melter 19"x14" in diameter, tank for straining cappings, 40 gallon tank for honey, used 60 lb. cans. Lura B. Scott, Bigelow, Missouri.

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200-10 frame hive bodies, 200 extracting supers—10-frame, 6\(\frac{1}{2}\)", bottoms, lids and inner covers, 1-8 frame honey extractor run by motor, one 2-frame hand operated extractor, 70 lbs. foundation wax—Dadant wired, 50 Gal. honey tank and valve, Electric uncapping knife. L. A. Leinbaugh, Lisbon, Iowa.

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WANTED-Extra white and light amber honey. Let us ship you the containers. Sell us your honey for CASH on delivery. The Hubbard Aplaries, Manufacturers of Bee Supplies and Comb Foundation, Onsted, Mich. WRITE FOR SHIPPING TAGS and current quotations on rendered beeswax. Any amount from one pound up bought. If you have 25 pounds or more, save 25% by letting us work it into foundation for you. Walter T. Kelley Co., Clarkeen, Ky.

CASH paid for quality clover honey. Send sample. Schultz Honey Farms, Ripon, Wisconsin.

WANTED: Another truck load of clover honey. Honey Boy, 2824 So. Belt, St. Joseph, Mo.

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PURE TUPELO and wild flower in 80's. Honey candy. En-R-G Foods, Inc., P. O. Box 232, Lancaster, Pennsylvania.

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-Crop and Market-

by M. G. Dadant

In spite of heavy snows and more than average cold in February, colony conditions do not seem to have deteriorated as much as might have been expected in the northern areas. It is true, however, that at the time this is being written there had not been enough time for reporters in those areas to carefully examine their outyards. We do not believe, however, that the losses will run much more than average the country Apparently colonies were in more than average condition to start the winter and the opportune January flights were of definite benefit. In the more southern areas, colony conditions are good though late with slight losses. In both cases, north especially, stores will have to be checked closely, since the heavy winter has necessitated larger consumption of honey.

As to be expected, the extreme drought, especially in the Plains states, in the East and in the Central South has meant that some of the legumes are not in the quantities, although late fall rains in many instances did give new sproutings a chance. This applies also to the Southwest. On the other hand, copious rainfall almost universally gives great promise of better than average possibilities. The west coast and southern California especially are greener than in many a season. The Southeast has now plentiful plants except, of course, for the damage to Florida citrus by cold spells.

MOISTURE

We do not remember a season when there were such universal reports of heavy to excessive moisture. This applies the country over except for northern Minnesota and Dakota and the Canadian prairie provinces where the almost universally scattered rains and snows do not seem to have extended. This applies to some extent in Montana also. California never had better moisture and plant conditions, which, with at least average colony conditions, bodes for a crop in the making.

LATENESS OF SEASON

The Southerners are complaining of two to three weeks late conditions, which will interfere BUT LITTLE WITH NECTAR PROSPECTS, BUT MAY offer difficulties with the package shipper, though just lately the worm seems to have turned and conditions are rapidly catching up. In the balance of the country the season may be a bit late. On the other hand, west coast conditions seem to be a bit ahead of time, with possibly some interference from rains, which, however, the Californians do not mind, because it has put the desert in rare shape.

INCREASE OR DECREASE

Apparently little either way, though some inclination is to hold at last year's totals and just make up the winter losses. Some evidence of increase on the west coast.

WINTER LOSSES

As stated previously, losses do not seem to be excessive, though in the North, lack of stores and prolonged winter may make more deductions necessary as the spring opens.

HONEY MOVEMENT - PRICES

Some amber honey left in the Southeast. Very little in any other parts of the South or East, or at least only enough to run the selling season out. In fact honey seemed to be moving better in late February and March than earlier. Packers were having to replenish stocks. This did not mean that prices had advanced in a jobbing way. In fact perhaps a little weakening, with, however, much of the California and intermountain crop being removed from beekeepers' hands. Some states reporting stocks include Michigan, South Dakota, Montana, the Canadian provinces, and to some extent in Ohio and Iowa, with amber in rather good supply in a few other states.

While there will no doubt be a holdover, much of it will be in the amber grades. Replenishing of stocks, a quickening of demand from Europe, and lighter crops in parts of the tropical America have had a beneficial effect towards restricting carry-over to moderate limits.

Honey Wanted-Cars and less than car. Top Prices.
C. W. Aeppler Co., Oconomowoe, Wis.

SUMMARY

All in all although crops will be limited by carry-over of plants (especially the clovers) owing to last year's drought, the over-all picture seems to indicate much better than average prospects the country-over. Excess moisture and unfavorable weather at harvesttime now seems to be a determining factor instead of drought, as was the case last year.

We are sorry that this page was missing in March issue. A little failure on the part of our space planning for the issue for which the writer wishes to apologize.

The Study of Pollen As A Bee Food K. Lubliner-Mianowska (Politechniki Gdanskiej, Gdansk, Poland). Acta. Soc. Botan. Polon. 25, 409-19 (19-56); Bee World 38, 293 (1957).

The pollen of 17 plant species is analyzed for water, ash, crude protein, reducing and non-reducing sugars, and ether extract and that of 13 other plants for crude protein only. Half the pollens contain 20-30% crude protein. There appears to be no direct relation between the physiological activity of the pollen and its protein content. It is noted that there are large discrepancies chemical analyses between pollen from the same species from different countries and that bee-collected pollen has a greater physiological effect on bees than hand-col--F. B. Wells lected pollen.

Royal Jelly Shipment

L. K. Hostetter, Bird-in-Hand, Pennsylvania, asks how to ship royal jelly abroad. This question was submitted to R. B. Willson. Here is his reply:

Royal jelly does not spoil readily as it has preservatives incorporated in it when it is secreted by the bees. One of these destroys bacteria and another prevents the growth of bacteria or similar organisms. Assuming you wish to send a small amount you may use an ounce jar. However the local post office at the point of arrival should be contacted to find out if royal jelly through the mail is allowable. No use going to much expense without this information.

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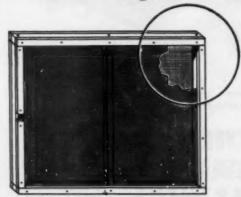
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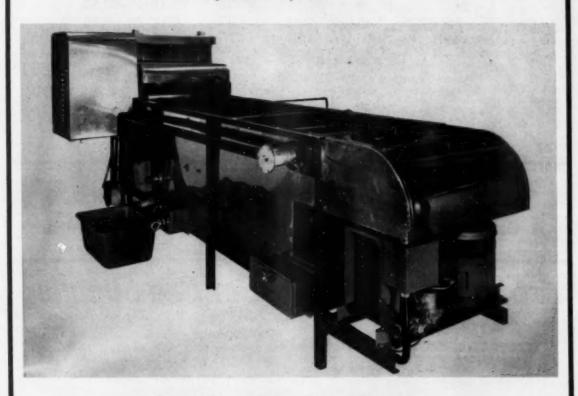


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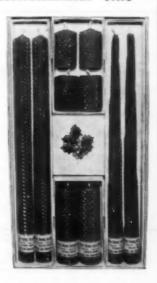
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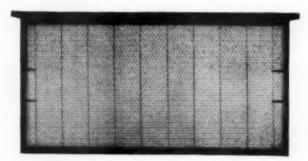
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